Quantum Gravity

And its Preponed Birth

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Dedication

This book is dedicated to my wife,
the late Dr. (Prof.) Surekha Saxena for
her confidence in my work and helping me
in editing this book and my total work.

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Forewords

1 Foreword by Dr. R.C. Saksena

Dr. R. C. Saksena, M.Sc. (Physics), Ph.D. (London, U.K.) Retd. Senior Scientist, National Physical Laboratory, New Delhi.

I am excited to introduce to you a ground-breaking work on, "Quantum Gravity," which delves into the fascinating world of gravity and quantum mechanics. The book explores the fundamental nature of gravity, its purpose, and the theory of quantum gravity that unites the quantum world with the general theory. This book offers a fresh perspective on universal constants, such as Planck's constant, Gravitation constant, Cosmological constant, Hubble's constant, and Rydberg constants, among others, by recalculating them in Planck units. It also introduces the concept of Energy as a positive fifth dimension of the universe, and how it plays a role in the formation of all space and matter. The book goes beyond theoretical discussions to explore the practical applications of these concepts in understanding the structure of the universe. It provides insights into the mysteries of dark matter and dark energy. "Quantum Gravity and its preponed birth" is a must-read for anyone interested in the fundamental nature of the universe and the forces that govern it. It is an engaging and insightful read that offers a fresh perspective on the fundamental principles of physics. I highly recommend this book to anyone seeking a deeper understanding of the universe. The book also deduces - What preceded and proceeded to 'big bang.'

I wish success to Dr. Ashok and his team.

2 Foreword by Prof. Shasi Kant Bhandari

Mr. Shasi Kant Bhandari, B.Tech, M.Tech (Hons), Asst. professor, Department of Mechanical Engineering, Amity University, Greater Noida, India.

Sometimes physics becomes more interesting than fiction as this book, like an archaeologist, will unearth many surprises for you. This 'geometrical Treo model' describes that gravitation is force developed to *neutralize* any exerted load on space matrix i.e., omnipresent Space-Time -Energy, while the broad *purpose of gravitation* is to make space matrix wrinkle free, as the force gathers all mass-energy from surroundings in gravitational spheres and black holes *and churns it to Hawkins's energy pairs*.

In the universe everything is continuously moving as weight less 'point masses' after being supported (Quantum Gravitation) by an equal number of particles of dark matter i.e., kinetons, which gets arranged in rotating kinetic coloumns according to proposed 'coloumn geometry'. Thus, every cosmic body rotates and affects the rate of rotation of nearby cosmic body. Affected by Rotation of Sun the Mercury completes its one *slow rotation* in 58.7 earth days and Venus sandwiched in between Mercury and Earth rotates in *reverse direction*, while its one day is longer (of 243 Earth days) than its one year (225 earth days). The presence of heavy Jupiter and Saturn in the ' solitary kinetic coloumn of Sun' tilts distal part of this coloumn which in turn *tilts the axis of rotation* of next planet Uranus by 98 degrees. Thus, Uranus rolls in its orbit and seems to be rotating in the opposite direction. Due to the very low density of Saturn its loose mass cannot be accommodated inside spherical mold of 3-dimensional deformation of gravitational field and seeps out in the orbits formed in its two-dimensional deformation, to show *spectacular rings of Saturn*. The biggest planet of Sun (conventionally named Megaskar) broke down long back, to form Asteroid belts.

All matter is made up of Mass units (Electrons) and all elements arranged in periodic table are formed by filling of empty *s, p, d, f* electron orbits in just four pair of shells, *which are mutually entangled at four atomic quantum levels,* and placed in deformation and counter-deformation of space matrix.

Preface

Any curious mind will not leave this simple book unread.

1 The standard view of quantum gravity.

The standard view of the struggle to master quantum gravity is that "we have the right crank, but we are not turning it correctly."

Physicist A. Zee suggests an alternative possibility in his book "On Gravity." He writes, "A *new structure will have to appear in physics* before we can master quantum gravity. Some might say that the structure has already arrived in the guise of string theory, but it may be far more exciting for theoretical physics to enter a truly revolutionary framework comparable in depth to quantum mechanics. *Perhaps quantum mechanics will have to be modified or extended*."

Zee hypothesizes that, like how it took until 1950 to fully develop quantum mechanics after the discovery of electromagnetic waves in 1886, it may take until 2056 for us to achieve quantum gravidynamics, at least 40 years after the detection of gravitational waves. The Treo model presented in this book can be considered as a significant step in the direction of this lofty ambition, and this delivery of precious child in premature environment, is not meant to surprise but rather to provide a framework and the base to build upon. This book presents an opportunity for all interested to gain further appreciation of this new-born topic of Quantum Gravity (or Quantum Gravidynamics) and nurture it further.

2 The problem with units.

A major limitation with traditional physics is that we try to study the universe using man-made arbitrary units, which complicates the task and

presents a complex and distorted 40000th part of view of the universe. The base unit of length, the meter, is defined as the distance from the equator to the North Pole of the Earth along the meridian passing through Paris, as measured by French astronomers Dalambre and Mechain in 1793. Similarly, weight (mass) is conventionally measured using an arbitrary "chunk of metal" called the kilogram (also known as "le grand K"), while time is measured in seconds which originated from Babylonian system of dividing the time in a day. These were disconnected but practical approaches used to arrive at fundamental units which represented everyday quantities based on the size and grasp of humans. However, when these units are used in theoretical physics to represent fundamental constants, it can lead us to a *dead end* at which Physics is standstill from last 100 years. The script of the universe's creation is written in a "cosmic language" the alphabets of which were discovered by Max Planck in 1900. https://physics.nist.gov/cgi-bin/cuu/Category?view=html&Universal.x=101&Universal.y=13

Planck constant $h = 6.62607015 \times 10^{-34}$ J Hz^{-1}

Planck length $lP = 1.616255 \times 10^{-35}$m

Planck mass $mP = 2.176434 \times 10^{-8}$kg

Planck time $tP = 5.391247 \times 10^{-44}$s

However, this ***language*** has not yet been fully understood, as Planck was unable to figure out the real meaning of the Planck units. The proposed model converts all distances to Planck's least length, all masses to Planck mass, and shows the **Planck frequency as the rate of the "cosmic rhythm"** at which the entire universe is vibrating. It also determines the secret rules, referred to as the "cosmic code" on which the universe works. The cosmic code deciphers this cosmic language, written throughout the universe.

The work of a theoretical physicist is to investigate an unsolved problem in nature by applying the laws of physics in the form of mathematical equations and trying to solve them to see how well they describe the real phenomenon. By applying the equations expressing

the relevant laws to the problem at hand, the theoretical physicist can make predictions about the outcome. While pure mathematical models of string theory and super-string theory are useful, it is necessary to understand the implications of these theories in the real world.

This is where the *cosmic code* comes in, as it allows for a translation of the pure mathematical models into the language of the physical universe. The Treo model introduces a new paradigm for understanding the universe and is a significant step forward in our understanding of quantum gravity.

3 Model dependent realism.

In 1931, Kurt Gödel proved his famous incompleteness theorem about the nature of mathematics, showing that there are problems that cannot be solved by any set of rules or procedures. [Reference 3]

Traditionally, scientists have focused on describing "what" and "how" things work, while leaving the question of "why" for philosophers to address. Mathematics can provide insight, but a good philosophical model of *reality* should be a fully consistent model (based on physics) that can be written in the language of mathematics. Before the development of modern physics, it was believed that all knowledge of the world could be obtained through direct observation and that things are what we perceive through our senses. However, modern physics conflicts with our everyday experiences. Some have argued that the world observed through our senses is only the surface manifestation of a deeper, hidden reality, where the answers to the great questions of existence can be found. The ancients were right; beneath the surface complexity of nature lies a hidden subtext written in a subtle mathematical code. The founding assumption of science is that the physical universe has a coherent scheme of things, an abstract order that cannot be seen, heard, or felt, but can be ***deduced***.

To deal with this paradox, we can adopt the approach of "model dependent realism." This approach is based on the idea that our brain interprets the input from our sensory organs and creates a model of

the world. When a model is successful at explaining things, we assign it the quality of reality or absolute truth. However, there may be many ways to model the same situation using different fundamental elements and concepts, and we are free to choose the model that is most convenient. The proposed Treo model of the universe's structure and quantum gravity is a geometrical string model that assigns a purpose to gravitation. It explains what quantum gravitation is and unifies all fields and forces, resulting in the unification of the quantum world with the general theory of relativity. This model also introduces the *concept of a fifth positive dimension of the universe as energy*, while describing our ten-dimensional, omnipresent "Space Matrix" (i.e., space-time-energy, with five positive dimensions formed by the Treo and five curled up negative dimensions represented by void).

This book is intended for scholars and every curious mind, and it brings a fundamental change to our understanding of the universe. While the public may skip over the simple additions and multiplications used for essential calculations, this book is for everyone who wants to understand the Space Matrix, our God. From Faraday and Maxwell to Hubble, Einstein, and Peter Higgs, scientists have been trying to understand more about this Space Matrix for the past 336 years since Newton. This book continues this journey of our understanding.

4 Our present understanding of Gravity.

Opinion of legends on gravity in retrospective – What is Gravity? Why do things fall?

Aristotle: Well, the Earth is the natural home for rocks and men. Rocks fall because they want to go to their destined home.

Newton: Rocks and apples fall because they, and the earth, and every other object in the universe exert an attractive force on one another.

Einstein: Newton is so right, but there is more to the story. Force fields are nothing but "changing geometry of space", the force Newton talks about results from the curvature of space and time, which are just two aspects

of space-time. The Earth warps space-time, so that when you jump, you are seeking the best deal in town, trying to extremize your action. The quantum theorist of gravity: Einstein somehow finds the quantum world distasteful, even though he was one of the founders of quantum physics. If he were not so stubborn, he might have realized that his curved space-time is due to gazillions of gravitons sashaying around. Gravitons zing back and forth like crazy between you and the earth.

I do not think that what all truth-sayers said above gives us a full picture of gravity. Newton said that gravitation is attraction between two bodies, but he could not tell the HOW and WHY of gravitation.

Einstein somewhat told us HOW it works by identifying the curved space-time around bodies, but again missed the WHY. What is the WHY of gravitation? In the universe, nothing happens without a PURPOSE. Whatever happens in the universe is just to fulfill some hidden purpose. Then one new question also pops up: "What is the hidden purpose of the gravitational force" in our universe?

Brief essence of proposed Theory of Quantum Gravity.

Quantum Gravitation studies that how space matrix reacts to any exerted load which may be of 'one unit photon' to 'unit black hole'. The Proposed Treo model proposes that Newton's gravitational attraction and Einstein's curvature of space-time are just two manifestations of the gravitational phenomenon. In fact, the space matrix, by its "gravitational kinetic energy" generated in the gravitational field with its contraction/ deformation, supports and neutralizes the exerted "load" of the body on it and then the body behaves as a weightless symbolic "point mass"; but then the question arises, how do bodies get attracted (move) towards each other?

The space matrix supports (and reacts to the exerted load of) all bodies adequately (and thus, gets curved) from all directions and planes, but when some other body comes in its gravitational field "then this common shared space matrix in between is inadequate to support to both bodies

(i.e., by generating an insufficient number of gravitons and its graviton columns required to support both bodies), and so the ill-supported bodies from in between fall towards each other."

Broadly, the purpose of gravitation is still bigger than just neutralizing the load of bodies on the space matrix. By gravitation, the space matrix just gathers matter from all around to churn it up in thus-formed evaporating black holes which work like hand grinders, churning matter and converting it into "Hawking radiation". This ongoing process is part of the "aging of the universe" which starts from its birth. This process is getting rid of the universe of all its matter and thus, of all curvatures of space-time (deformations), to flatten the space matrix fully like a *wrinkle-free sheet* and bringing the universe to its "maximum total potential energy state" having maximum entropy.

This process of flattening is further aided by the accelerating expansion of the universe. It is essential for the death (or big-crunch) of the universe to reach this flattened out high-potential energy state to be again reborn as a baby universe. The reason is that immediately following the full flattening out of the space-matrix the "potential energy state" will be highest and the situation will be unstable as the voids would have fully uncurled to become the size of the Treo particles. The annihilation of Treos with voids will cause a big-crunch of this expanded sheet which will at once take the universe to its "maximum total kinetic energy state" with another big-bang, by changing it into a fully *crumpled sheet*. This crumpled sheet will again start to flatten and thus, our immortal (never-ending) "Quantum Pendulum Universe" completes its one swing or its "one life span."

Structure of Space Matrix

1.1 Nothing comes out of nothing, emptiness is not empty.

It has long been stipulated that Space is not empty but rather permeated by a field or substance. Earlier, this view of space was named by Albert Einstein as 'Space-Time' and by Peter Higgs as the 'Higgs field'. It has been proposed in the past that space is permeated by a 'non-zero energy field'.

In the Treo model described in this book as well as in my earlier writings, it is proposed that beyond the three dimensions of space and the fourth of time, there is fifth dimension of the universe, which is ENERGY, and a more complete understanding of the fundamental properties of space can be obtained if we consider it to be a continuum of Space-Time-Energy. It is described in this book that the inclusion of Energy as an additional dimension can help to bridge the gap in the current understanding of the cosmos and pave a way towards the enigmatic Grand Unification Theory. This proposed continuum of Space-Time-Energy is called 'Space Matrix' in further sections of this book.

The theory which describes the properties of space matrix and its interrelationship with matter and forces is being termed as the 'Treo Model' in this book. Some universal properties of forces and motion of bodies were first described by Newton through his Gravitational field equations and his three famous Laws of motion (Principia Mathematica,1687). Although the laws were meant to describe and predict the motion of objects in space, we can also see them as describing the properties of space matrix in which all objects are suspended. Newton's laws matched well with the experimentation and observations,

the missing piece till now has been the *underlying mechanism through which these laws or rules operate*. Since the same behavior is seen for all sorts of objects and in all inertial frames of reference, it is proposed in the Treo model that these laws are describing the properties of the omnipresent space matrix.

Faraday, Maxwell, Einstein and Peter Higgs have contributed to the further understanding of space, forces and interaction of objects in space along with many more scientists and thinkers, and in one way or the other all are exploring or describing one or the other properties of the same space matrix.

Despite knowing and using the laws laid down by Newton more than three centuries ago, have we tried to understand the basis of Newton's third law of motion? When we say, 'Every action has an equal and opposite reaction', do we know what reacts and how? When you hit a ball on a wall (action), do we understand the mechanism that throws back the ball to you (reaction)? The answer so far is a big NO.

It has long been considered as related to translational symmetry property of the universe or due to conservation of momentum as stated in Newton's second law, but it is not really explained what mechanism leads to space exhibiting such behavior. The proposed Treo model will try to answer this long-standing question. Further, by studying this action-reaction mechanism in detail in this model, we will surprisingly not only unearth quantum gravity, but it will also take us one step closer to the long-awaited grand unification theory, popularly called the 'theory of everything'.

The Treo model advocates that only 'one object and one tool' is used in creation. But what is this one object and how this one action-reaction tool is used to carve entire creation, are the subject of this book. This book details a new geometrical quantum model, named Treo model, which uses Planck's units and leads us to 'Quantum gravitation' and unification of forces.

Postulates of the Treo Model.

1.2 One object of creation.

1.2.1 Treo as Precursor (generator) of All Space and All Matter.

The proposed model names the fundamental primordial particle (which initially comprised primordial soup), commonly known as a string, as Treo in this model. Treos are proposed to be one-dimensional and each of Planck's least length. Treo present themselves in one dimension of length, have a fixed mass and energy and they vibrate continuously, each time in a different plane of a circle until it reaches back to the starting plane and the cycle repeats, to create all five-positive dimension of space represented by active space-matrix.

$$= 1.616255 \times 10^{-35}\,\text{m} \tag{1.1}$$

$$= 6.32582652229 \times 10^{-95}\,\text{kg} \tag{1.2}$$

$$= 5.6831651 \times 10^{-76}\,\text{J} \quad (\textit{Applying } E = mc^2) \tag{1.3}$$

In this model, we will study how Space (space–time–energy) and matter are created, by this Treo[1]. Treos are divided into two categories 'free treos' and 'bound treos'.

Quanta of ***free treos***; accumulate and pile up in integral numbers to produce *EM energy* of photons and mass energy of all *matter*. While ***bound treos*** gets arranged alternately with voids, to construct SPACE MATRIX. They construct all three dimensions of Space, marks the fourth dimension of Time, while they themselves are vibrating particles by which they represent (proposed) fifth positive dimension of universe, ENERGY. **Voids** are curled up 'five negative dimensions of universe' and when woven alternately with bound treos (with its five positive dimensions), it produces our 'TEN-DIMENSIONAL SPACE MATRIX'.

1 [1]Occam's razor by William of Ockham (1287-1347) [Ref.1] is a problem-solving principle— it dictates that in a model, fewer the assumptions made, the better is the model.

1.2.2 The Cosmic code denoted by the constant 'S'.

Omnipresent Space-matrix oscillate at 'cosmic rhythm' i.e., Planck frequency (S times per second) as all bound treos of universe vibrates simultaneously, each time after a gap of Planck's least time, in all S planes in 360 degrees of a circle, and all Five positive dimensions are created.

This rhythm of vibrations of all bound treos in space matrix, at 'Planck frequency' regulates our universe as 'COSMIC CODE'.

Throughout this book, 'S' is denoted as a fixed *unit less constant*. It can be a fundamental property of the universe in ways we will see henceforth, hence it can be a 'cosmic code' which governs our universe.

Planck's frequency = $1.855394409 \times 10^{43}$ vibrations per second (1.4)

This number $1.855394409 \times 10^{43}$ is COSMIC CODE; and 'S' is the proposed *new 'dimension less constant'* in this model.

$$S = 1.855394409 \times 10^{43} \quad (1.5)$$

Each bound treo vibrates, by 'S' number of vibrations per second in all S number of planes in 360 degrees of a circle. In turn, this constant 'S' decides all other universal constants.

- S number of treos is 'one quantum energy', which is also the 'quantum of unit action' and the value of Reduced Planck constant: $\hbar$ (h bar).
- While Planck constant: is the 'angular momentum of one quantum mass-energy.' i.e.,

  $$h = \hbar \times 2\pi = S \times 2\pi \quad (1.6)$$

- S free treos is one quantum EM energy: present in one-unit photon.
- S bound treos distance per second (in S vibrations) is the Speed of light, *c.*: Refer equation 1.8.

- $2\sqrt{S}$ quanta free treos is mass energy of one biggest Gamma photon, Page 173.
- $\sqrt{S}$ Quanta free treos is mass energy of one-unit electron; and it is also one-unit charge, Page 177.
- S quanta or S^2 treos makes one 'unit mass' (Planck mass), Page 114.
- S^2 kinetons in one 'graviton coloumn' of one graviton supports 'one-unit mass'.
- "One-unit mass is supported by S^2 kinetons per second per second", it is derived value of Gravitational constant, Page 135.
- Uncurling of each void per vibration, by $\frac{1}{S^2}$ of Planck's length, at each point (bound treo) of universe, is the value of cosmological constant: Page 162 and this rate of expansion of universe calculate the present value of Hubble constant. Page 164.
- S seconds (S^2 vibrations) is one life span of universe: while S unit space matrices are in one side of cube of fully expanded 'one unit universe' (which is contracted in 13.8 billion light years as our 'present size of contracted universe'.)

1.2.3 Creation of three dimensions of Space.

Bound treos (Precursor of all five positive dimensions) are placed alternately with voids ('voids' represents five curled up negative dimensions) and thus, it weaves our ten–dimensional uniform, omnipresent space–matrix (SPACE-TIME-ENERGY).

One-dimensional treo can form 3 dimensional spaces, by their mode of compilation. When arranged side by side along a line, it produces the first dimension of Length. To construct two dimensions of length and breadth, they construct figures of squares. Finally, they construct all 3 dimensions of space (length, breadth and depth) as small cubes of Planck least length, in multi layered space matrix. One unit space matrix can be imagined to be a big cube where each side is of S bound treos.

1.2.4 Creation of Fourth Dimension of Universe – Time.

Time and space together formed our four dimensional 'Space–Time'. Each bound treo vibrate by S number of vibrations per second with a *time gap* of Planck's least time, in between its two such vibrations. All the treos of the universe vibrate simultaneously and thus, whole universe vibrates at S frequency (Planck frequency).

The minimum time required for any action to take place is this *time gap* of 'Planck least time'. It may be a physical action or any chemical or biological processes which occur around us; thus, it collectively changes our universe constantly and continuously to which (change) we humans perceive as 'flow of time'.

If there is a *reduction in number,* in total S vibrations per second, of all bound treos in any local area, the *time gap* between its two vibrations i.e., Planck's least time, will increase, which in turn will increase 'minimum reaction time' or the 'least processing time' and now every action (Kinetic, or chemical and biological process) will take more time. It will slow down the rate of change to which we perceive as a 'slowdown of time' in the local area involved. If no changes occur, the Time will stop, and then the universe will look like a photograph.

e.g., We take note and consider this difference in time gap, in between the rate of flow of time at satellite 'satellite time' (i.e., 'rate of vibration' of local bound treos around 'satellite watch') and rate of flow of time at Earth i.e., 'Earth time' (i.e., 'rate of vibration per second' of local bound treos around 'Earth watch') in our calculations which is needed to synchronizes our GPS (Global positioning system).

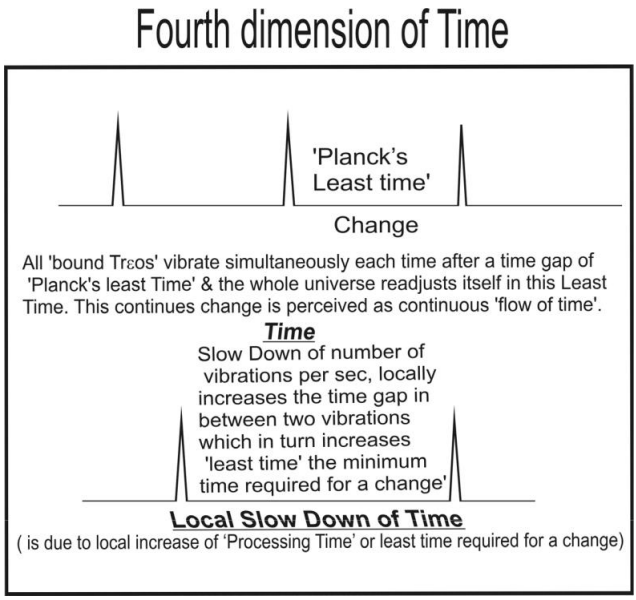
Fourth dimension of Time
'Planck's
Least time'
Change
All 'bound Trεos' vibrate simultaneously each time after a time gap of 'Planck's least Time' & the whole universe readjusts itself in this Least Time. This continues change is perceived as continuous 'flow of time'.
Time
Slow Down of number of vibrations per sec, locally increases the time gap in between two vibrations which in turn increases 'least time' the minimum time required for a change'
Local Slow Down of Time
(is due to local increase of 'Processing Time' or least time required for a change)

Figure 1.1: Each Bound treo in space matrix vibrates by S Times per second (after a time gap of Planck's least time). In this time gap universe each time readjusts itself, in a process of constant change and this change is perceived by us as 'flow of time'.

No time machine (to visit past or future) is possible as we are living in constantly changing universe, transforming with its each new vibration, leaving behind its no traces of past universe e.g., it is similar to our body which has evolved from a baby, with no remnants of baby body left behind and we cannot transform our present body in a baby body, while watching our old photographs, [similarly we can only see the photos of our past universe (which does not exist at all presently), when we observe our old universe by telescopes].

1.2.5 ENERGY – Proposed fifth dimension of universe.

Potential and Kinetic Energy.

All 'Electromagnetic energy packets' (photon) and all 'mass energy packets' up to one 'unit mass', exert a load along its *length of spread* in a line at each apex bound treo along its Reduced Compton wavelength. This **load exerted at each point**, at any one apex bound treo which are present all along wavelength of any packet (from *unit photon to unit mass*) or the *load* at one

gravitational centre of a body of any number of free treos, is neutralized by conversion of ***equal*** number of bound treos into kinetons, which get arranged in one kinetic coloumn according to proposed 'Coloumn geometry'.

Why Kinetic Energy Erupts When Space –Time Contract?

Bound Treos not only create space but regulate its time, while its potential and kinetic energy fluctuates along with the expansion and contraction of space (space matrix). All bound treos of space–matrix, which are not subjected to load, simultaneously vibrate by 'S vibrations per one second' (in 'unit time'), "in all possible S planes of a circle". Each undeformed bound treo will vibrate in all S number of circles, present in total S directions (which are possible) in a sphere, in its allotted life span of S seconds, which also matches with proposed one life span of universe. When any one such bound treo vibrating in all 'S planes of a circle' is subjected to (a minimum) 'load' of one free treo (an action), its planes of vibration (or the degree of freedom) is restricted and this bound treo will now vibrate S times per second only in the direction of load, to support or neutralize this load (mass pressure or momentum) on space–matrix continuously, in equal and opposite reaction, Figure 3. This restriction of planes of vibrations of all bound treos involved will simultaneously *contract local space* (matrix).

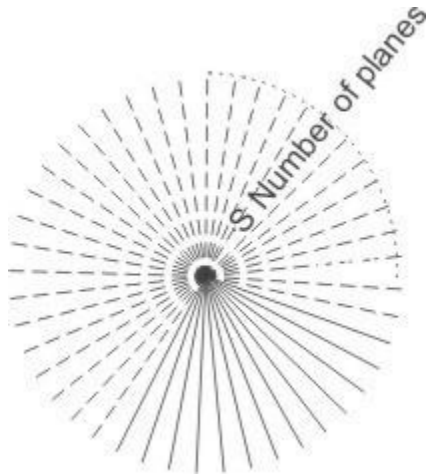

Figure 1.2: Each Bound treo vibrates S times per second, with S number vibrations in all S planes of a circle (i.e., S degrees of freedom). S number of such circles can only form in S number of directions, which are possible in a sphere.

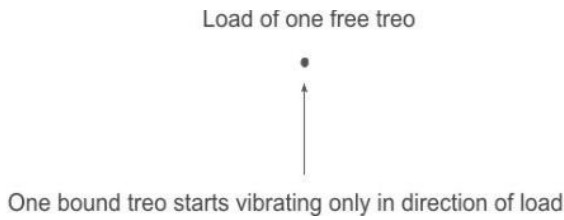

Figure 1.3: When any bound treo of space–matrix starts vibrating only in the direction of load (to supports one free treo; load) it is called 'kineton'.

How Time Slows Down in Gravitational Field

(Along with increasing gravitational kinetic energy towards centre)

With *conversion of bound treo in a kineton* along with change of its potential energy into kinetic energy as described above, not only space contracts but Time also slows down by simultaneous curtailment of its number of vibrations per second. We will understand it with the 'slowdown of time' at $\sqrt{S}$ number quantum levels in one gravitational sphere of 'unit black hole' with successively increasing contraction of space towards its gravitational centre.

In this gravitational sphere of S layers of 'unit black hole', all bound treos in all successive concentric layer towards its gravitational centre reduces its 'number of vibrations per second' by 1 vibration per quantum level, and thus, the time will gradually slow down at its gravitational centre in S layered gravitational sphere. This slow-down of time is also reflected in 'gravitational field' (which itself is formed by uncurling of all 'Graviton coloumns' of all gravitons present in gravitational sphere) of any cosmic body.

Thus, as observed, when the 'gravitational kinetic energy' condenses in gravitational field towards gravitational centre of cosmic body, time also slows down. Thus, we see that in Space Matrix its 3 components of Space- Time- Energy are interdependent and not only kinetic energy is produced by 'bound treos' (by its conversion into a 'kineton'), but local 'flow of time' is also affected (slow down) by this *contraction of Space*.

How weight of a fast-moving body increases (Theory of Relativity)

In a fast-moving body to match its increased momentum, increasing number of kinetons are added, proportionate to its increasing speed, *with increasing layers* in its all kinetic coloumns which are formed at each apex bound treo along its wavelength and thus, the *mass of moving body increases* with its increasing momentum, with inclusion of new bound treos with these added layers (Dark matter particles) after being converted in kinetons.

How particles get Mass (Higgs mechanism)

The 'bound treos' (particles of Dark matter) from space matrix can be entangled with 'Free treos' i.e., 'particles of matter' *only after* its conversion in kinetons and it thus, gives explanation of 'Higgs mechanism' (particle gets mass by interacting with the Higgs fields). This mechanism is primarily involved in production of one 'MASS UNIT' of 35.01 MeV (basic unit of all matter). In this formation of one 'mass unit'; *one unit electron gathers 68.5 times bound treos as kinetons or dark matter*, and its '35.01 MeV mass energy' is calculated by dividing 0.51 MeV (in unit electron) by twice of fine structure constant. It is shown that all visible matter is made up of integral number of 'mass units.' (See page 185)

1.2.6 Action-Reaction Mechanism.

We throw a ball on wall (action) and it comes back to us (reaction), a rocket accelerating in space, when releases hot gases backwards from its engine, in an action, then in a reciprocal equal and opposite reaction, it gets a forward thrust which pushes rocket forward, and similarly while walking when we push earth back ward (action) by our foot, then we get a forward push (reaction), which move us ahead (and we walk). These are few examples of Action-reaction mechanism governed by third law of motion '*every action has equal and opposite reaction*', but we are still unaware about, how this action-reaction mechanism is executed in universe.

For any exerted 'load' (any mass or momentum), at any point (on any one apex bound treo along its RC wave length or at its solitary

gravitational centre) on space matrix, of any number of free treos (Action), equal number of kinetons get arrange themselves according to coloumn geometry (as discussed below) in one supporting kinetic coloumn at this point, to neutralize (Reaction) this load, and thus, Action-reaction mechanism is executed by space matrix.

The space-matrix has *three interdependent components of space-time -energy*, where if one component changes its value, the value of other two components will accordingly change instantly. When space gets locally contracted by conversion of bound treos in to kinetons along with *reductions in its planes of vibration*, the potential energy of each involved bound treo is converted into kinetic energy, with its conversion in kineton. The time slows down locally by *reduction in its number of vibrations* of all bound treos in involved local space matrix.

The vibrating bound treos in all S planes in un-deformed space matrix generates its base potential energy of universe (so un-deformed space matrix has non-zero energy in its field). But when the load on space matrix *restricts the plane of vibration* of equal number of involved bound treos, which now vibrate only in the direction of load (to support it indefinitely after being converted in to kinetons) and so they themselves contract, resulting in contraction of local space as well (in a lay man language: it form small 'knot at this point in omnipresent net of universe') and thus, generate kinetic energy locally to execute the action-reaction mechanism.

With increasing load at each quantum level ($\sqrt{S}$ *quantum levels* are in each of five dimensions in universe) in this quantum universe, firstly all three dimensions of one-unit SPACE matrix (a cube of S bound treos on its each side) one by one gets involved (and Knot form one over other with these wrapping) and it forms different geometrical formations, (or kinetic coloumns in first, second and third dimension), and then fourth dimension of TIME and lastly fifth dimension of ENERGY also get involved in 'this Knots formation one over other' i.e., to form kinetic coloumns of their respective fields.

'Free treo packet' of all photons and all elementary particles spread evenly on space matrix in a line and exert uniform load (Action) on each apex bound treo along its length (RC wavelength) according to its packet density. This exerted load 'at any one apex bound treo along wavelength of packet or at one gravitational centre in any multiple unit masses body' is neutralized by formation of one kinetic coloumn. With increasing load at a point, the deformation/contraction increases, and equal numbers of bound treos are converted into kinetons, which get arranged in shape of a 'kinetic coloumn' according to proposed 'coloumn geometry'.

1.2.7 Speed of Light.

(Speed of displacement of photon packet per second)

Each time after one Planck's least time, by next one vibration, the photon packet slides in *translational motion* to adjoining 'next bound treo' in direction of its progression, on space matrix. And thus, by S vibrations in one second, it moves by S number of (i.e., $1.855394405 \times 10^{43}$) bound treos distance per second.

Speed of light = Number of vibrations per second × displacement of photon packet per vibration

= ($1.855394409 \times 10^{43}$) vibrations per second × ($1.615788303 \times 10^{-35}$) m.

= 2.997924×10^{8} meter per second, which is c, or speed of light in vacuum.

Hence,

$$c = S \cdot LP \qquad (1.8)$$

*Where Planck's least length or LP = $1.615788303 \times 10^{-35}$m is space occupied by one bound treo in length.

This calculation indicates, (as it is calculated from two constants of Planck's least length and Planck's least time), that the speed of light is also a constant and is ultimate speed of movement in our universe,

in un–deformed space matrix. Thus, speed of light, also confirms the proposed 'structure of space matrix' as described in this treo model.

As this moving deformation (kinetic coloumns produced by load of a photon packet or a body) moving at the speed of light with EM packet or at sub luminal speeds with a moving electron or anybody, *cannot die by itself* (without being opposed by other deformation) and thus, it is conserved and moves along with the moving photon packet or a body indefinitely; it is the basis of conservation of momentum and the reason behind first law of motion (if a body is moving it will go on moving indefinitely until a retardation force is applied on it).

Chapter 2

Deformation of Space Matrix

Treo is '**one object of creation**' and 'load dependent increasing deformation in increasing number of dimensions of unit space matrix' is '**one tool of creation**'.

2.1 Deformation of all five dimensions of space-time-energy

We will first summarize, and then study in detail, that how with increasing load, the 'uniformly distributed Space, Time and Energy in omnipresent Space matrix of universe' increasingly contracts/deforms locally (Like knot formation in a net), along with inclusion of all five dimensions of space-time-Energy one by one, which *changes the local geometry to construct the fields of all four fundamental forces*.

Every 'load' is an action on space matrix, exerted by fixed number of free treos (as mass or momentum) which is reacted with equal force by conversion of equal number of bound treos into kinetons.

This universal phenomenon is the *one and only tool of creation*. To execute any 'action reaction mechanism' universe does not react as a whole to an action (load), but only UNIT SPACE, a cube having S bound treos on its each side, *counted from any point where load is exerted* reacts first, and deforms step by step with increasing load, by conversion of equal number of bound treos into kinetons which get arranged according to proposed coloumn geometry in to kinetic coloumn, which counter-acts the load at this point.

This conversion of bound treos into kinetons successively involves all three dimensions of space one by one of UNIT SPACE MATRIX. This unit space can be compared with a book, where one line is of S number

of alphabets and there are S such lines in one page of this book having S number of such pages.

Universe has only one force, which is generated by kinetons in all types of its kinetic coloumns, (small or big, may be single or wrapped one over other i.e., as knot; where kinetic coloumns wrap one over other in all five dimensions one by one thus, increasing the size of knot); and thus, space contracts locally. When *multiple unit space matrixes get involved, it is accompanied by the deformation of fourth dimension of Time as well*, and then local time also slows down in deformed area. To accomplish Action-reaction mechanism the involved local space matrix with its multi-dimensional deformation changes local geometry to construct the fields of all four basic forces.

In our quantum universe the mass energy does not increase linearly, but it increases as *one unit at each of* $\sqrt{S}$ *quantum levels* in all five dimensions of space–time-energy. Type of unit which increases is fixed for each dimension, which is i.e., unit photon (one quanta or S free treos), unit electron ($\sqrt{S}$ quanta), unit mass (S quanta), electron black hole ($\sqrt{S}$ unit masses) and unit black hole (S unit masses) for first to fifth dimensions respectively. This additional EM/MASS energy is supported by space matrix by addition of *one new layer in kinetic coloumn at each next quantum level* of dimension and thus, equal number of kinetons in supporting kinetic coloumn act together to neutralize the exerted load of free treos at this point.

For any ACTION initiated, as applied 'load' of treos (of any mass or momentum) at a point (at each apex bound treo along decreasing wavelength in 1st and 2nd or at one gravitational centre in 3rd, 4th and 5th dimension), the space matrix REACTS to this increasing load.

In 1st and 2nd dimensional deformation it supports which ranges from a **unit photon** of one quantum EM energy (which exert a *minimum load of one free treo* at each apex bound treo along its S bound treos wavelength), to the load of '**one-unit mass**' or Planck mass i.e., S quanta mass energy (S^2 free treos), exerted at 'one-unit gravitational centre'.

At each next quantum level in first and second dimensional deformation with increasing masses and decreasing wavelength, exerted load increases by '*square of quantum level number*.' Then in third and fourth dimensional deformation the exerted load at gravitational centre of this body increases by '*square of unit masses*' of its mass energy, because this mass energy is to be supported from all sides and all planes of all three dimensions of space. Thus, the maximum load of S unit masses in third and load of S^2 unit masses in fourth dimension, at respective gravitational centre is supported by conversion of equal number of bound treos of space matrix in to kinetons, which collectively form one reacting kinetic coloumn at this point i.e., at 'gravitational centre of body' to neutralize this exerted load.

Finally, to support the maximum Load of S^3 unit masses, of a 'super massive black hole' made up of $\sqrt{S}$ Unit Black holes the full contraction of all 5 positive dimensions of SPACE-TIME-ENERGY of one sheet of 'unit universe' occur, with the formation of 'gravitational singularity' at its gravitational centre.

With step-by-step increasing mass energy as integral number of *units* at $\sqrt{S}$ quantum levels [where units are, one quanta (S free treos), $\sqrt{S}$ quanta, S quanta, $\sqrt{S} \times S$ quanta and S unit masses respectively] the exerted load is supported, at each of $\sqrt{S}$ quantum level of all five dimensions, by addition of one new layer in all kinetic coloumns which get 'additional number of kinetons' to balance equal 'load in free treos' at one point.

Thus, with increasing load at any one point, the reacting kinetic coloumn (according to its type and size of deformation) changes its geometry and amount of force, due to inclusion of increasing number of (five) dimensions of space–time- energy one by one at its $\sqrt{S}$ quantum levels.

Then the nature of force first changes from EM force to atomic forces and to neutralize the still higher load of a body (made up of multiple unit masses) 'gravitational forces' erupt and then 'gravitational sphere' along with its 'gravitational field' is formed for any cosmic body or unit black hole.

Kinetons represent kinetic energy and '*S' number of kinetons are equal to one quantum kinetic energy*. To execute a REACTION, after upper limit

of first dimension (deformation in length) to '*accumulate maximum of S kinetons at a point'* in one sub kinetic coloumn, is crossed then the unit space matrix involves its second dimension of breadth as well. Then, it accumulates 1 to S orbitums (each made up of S kinetons) in one 'graviton coloumn' i.e., kinetic coloumn of second dimension and then 1 to S Gravitons (each made up of S orbitums or S^2 kinetons) accumulate to form kinetic coloumn of third dimension i.e., first time named as one 'electron black hole'.

The contraction of unit space matrix, first occur in length i.e. all (S) bound treos along a line in length, but with still increasing load it gradually involves all S^2 bound treos present in one sheet (in length and breadth) of unit space matrix, and finally with extending the contraction in depth as well, it involves all S^3 bound treos in length, breadth and depth of one unit space matrix. Thus, by complete deformation of first (length), second (length and breadth) and third dimension (i.e., all three dimensions of space of one-unit space matrix), the *base energy* of each dimension is achieved i.e., energy of S kinetons, S^2 kinetons and S^3 kinetons respectively.

Thus, with increasing load, the deformation (kinetic coloumn formation) successively involves one (length), two (length and breadth), three (length breadth and depth of unit space matrix) dimensions of unit space and then deformation of fourth (Time) and fifth (Energy) dimension occurs with involvement of multiple unit space matrix.

2.1.1 Deformation in First Dimension.

With successive *increase of* ***one quantum mass energy (present in one unit photon)*** at each of $\sqrt{S}$ quantum levels in first dimension, $\sqrt{S}$ types of all photon packets of EM spectrum are produced. Each photon packet spreads uniformly in a line on all apex bound treos along its (gradually reducing) wavelengths and exert uniform load, on each (point) apex bound treo.

From unit photon to unit mass, wavelength of any packet can be calculated by dividing S number of bound treos with number of quanta in packet; **λ in bound treos = S bound treos/number of quanta energy**

in packet. With increasing EM energy in photon packet to support its increasing 'load' at each apex bound treo (present along wavelength of packet) in terms of FREE TREOS by 'square of quantum level number', the equal numbers of bound treos of space matrix are converted in to KINETONS, to accomplish Action-reaction mechanism.

These kinetons get arranged as transverse *sub-kinetic coloumns* (of 1 to $\sqrt{S}$ layers formed at each point i.e., apex bound treo) along its full wavelength and thus, the EM fields of EM forces are generated. (Figure 2.1)

With increasing EM energy on its gradually reducing wavelength (along with increased density of packet), the load on each apex bound treo in wavelength increases, at each next 'nth' quantum level by square of free treos i.e., n^2 free treos. (2n-1) kinetons are added as any nth layer of each 'sub kinetic coloumn' present on all apex bound treos along its wavelength; at 'nth' quantum level; to support this 'n' quanta photon packet by its respective EM wave.

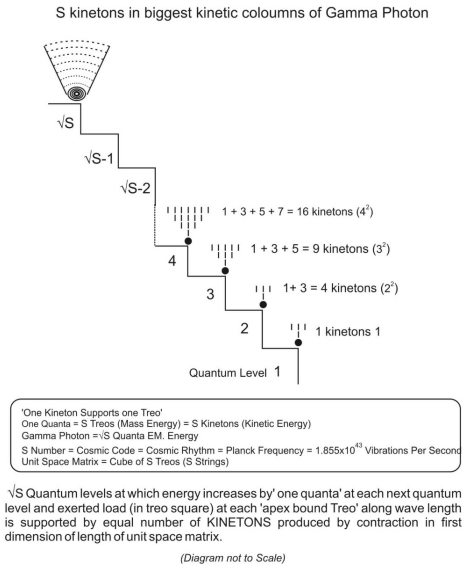
S kinetons in biggest kinetic coloumns of Gamma Photon
√S
√S-1
√S-2
1 + 3 + 5 + 7 = 16 kinetons (4²)
4
1 + 3 + 5 = 9 kinetons (3²)
3
1+ 3 = 4 kinetons (2²)
2
1 kinetons 1
Quantum Level 1
'One Kineton Supports one Treo'
One Quanta = S Treos (Mass Energy) = S Kinetons (Kinetic Energy)
Gamma Photon =√S Quanta EM. Energy
S Number = Cosmic Code = Cosmic Rhythm = Planck Frequency = 1.855x10⁴³ Vibrations Per Second
Unit Space Matrix = Cube of S Treos (S Strings)
√S Quantum levels at which energy increases by' one quanta' at each next quantum level and exerted load (in treo square) at each 'apex bound Treo' along wave length is supported by equal number of KINETONS produced by contraction in first dimension of length of unit space matrix.
(Diagram not to Scale)

Figure 2.1: One quantum (S free treos present in unit photon) as one unit, increases at each of $\sqrt{S}$ quantum level, and the load exerted at each apex bound treo along its wavelength, of thus, formed photon packet at any quantum level is "square of this quantum level, in number of free treos" is supported by one 'sub kinetic coloumn' having equal number of kinetons.

2.1.2 Deformation in Second Dimension

As the deformation increases and involves second dimension of breadth as well, with *increase as one unit of* $\sqrt{S}$ ***quanta mass energy (in one-unit electron)*** at each of $\sqrt{S}$ quantum levels of second dimension, packets of all elementary particles are formed at their matching quantum levels.

Thus, 'one **mass unit**' at 68th quantum level, nucleons e.g., one proton at 1836th quantum level of second dimension, atoms of all elements, molecules (at their respective quantum levels) and *finally one unit mass* (Planck mass: 2.17643 × 10^{-8} Kg: i.e., S quanta mass) is supported at last $\sqrt{S}$ th quantum level of second dimension.

With increasing mass energy on its gradually reducing wavelength in second dimension the load on each apex bound treo along its entire wavelength (at each point) increases at each 'nth' quantum level by square of quanta i.e., n^2 quanta. To support its each 'one quanta load' (S free treos) at any point (at each apex bound treo), 'one orbitum' (of equal number of S kinetons), is added in sub shells, to accomplish Action-reaction mechanism. Thus, the total number of orbitums formed are *always equal* to the 'mass energy quanta' in any elementary particle packet. With addition of one new nth sub shell (layer), (2n-1) orbitums are added, in each shell (kinetic coloumns) present on each apex bound treo along its RC wavelength, at each next nth quantum level. At their matching quantum level any elementary particle is supported by thus, formed 'one matter wave' in second dimensional deformation.

Finally with completion of this $\sqrt{S}$ layered 'full kinetic unit gravitational coloumn' which is now named as *"graviton coloumn" supports 'one-unit mass'* (or Planck mass, roughly equivalent to the mass equal to size of one flea egg) *at one graviton*. One full sheet of unit space matrix contracts to form one graviton. One unit mass is the maximum load, which can be supported at a point, anywhere in universe at its one 'unit gravitational centre' by one graviton with its curled-up graviton coloumn. Figure 2.2.

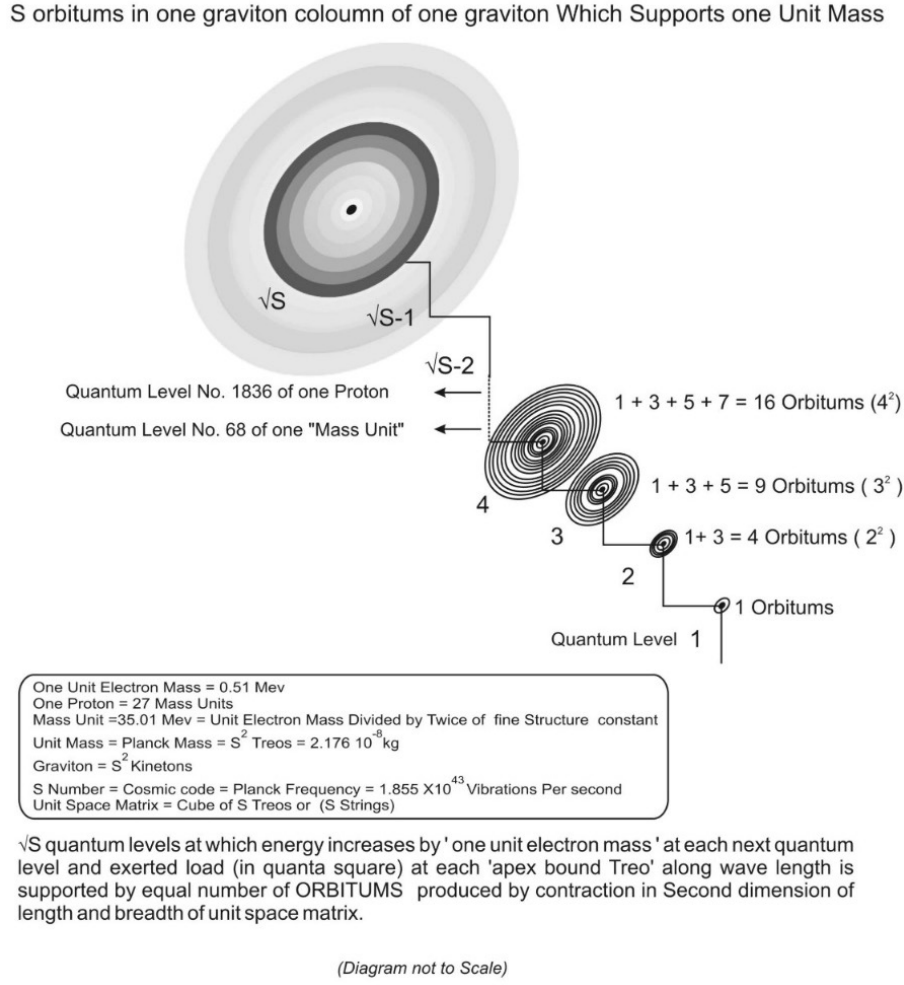
S orbitums in one graviton coloumn of one graviton Which Supports one Unit Mass
√S
√S-1
√S-2
Quantum Level No. 1836 of one Proton
Quantum Level No. 68 of one "Mass Unit"
1 + 3 + 5 + 7 = 16 Orbitums (4²)
1 + 3 + 5 = 9 Orbitums (3²)
1+ 3 = 4 Orbitums (2²)
1 Orbitums
4
3
2
Quantum Level 1
One Unit Electron Mass = 0.51 Mev
One Proton = 27 Mass Units
Mass Unit =35.01 Mev = Unit Electron Mass Divided by Twice of fine Structure constant
Unit Mass = Planck Mass = S² Treos = 2.176 10⁻⁸kg
Graviton = S² Kinetons
S Number = Cosmic code = Planck Frequency = 1.855 X10⁴³ Vibrations Per second
Unit Space Matrix = Cube of S Treos or (S Strings)
√S quantum levels at which energy increases by ' one unit electron mass ' at each next quantum level and exerted load (in quanta square) at each 'apex bound Treo' along wave length is supported by equal number of ORBITUMS produced by contraction in Second dimension of length and breadth of unit space matrix.
(Diagram not to Scale)

Figure 2.2: $\sqrt{S}$ quanta (unit Electron = $\sqrt{S}$ x S free treos) as one unit increases at each of $\sqrt{S}$ quantum level, and the load exerted at each apex bound treo along its wavelength, (of thus, formed any packet) at any quantum level in terms of number of Quanta, is square of this quantum level number, and it is supported @ one quanta per orbitum.

2.1.3 Deformation in Third Dimension.

The body made up of multiple unit masses and its load (square number of unit masses in body, exerted at its one gravitational centre) is supported by equal number of gravitons arranged in spiral layers of one kinetic coloumn of third dimension i.e., 'one electron black hole'. With *increase*

of one-unit mass (or S quanta mass energy) as one unit at each of $\sqrt{S}$ quantum levels in third dimension, 2n-1 gravitons are added at each next n^{th} quantum level in solitary kinetic coloumn (i.e., electron black hole) of third dimension. Finally, one cube of unit space matrix (with all its S sheets) by its full deformation, produces $\sqrt{S}$ number of spiral layered completed 'electron black hole', (the kinetic coloumn; having S number of gravitons) which supports the exerted load of S unit masses (i.e., square of $\sqrt{S}$ unit masses in body) at its one-unit gravitational center. (Figure 2.3)

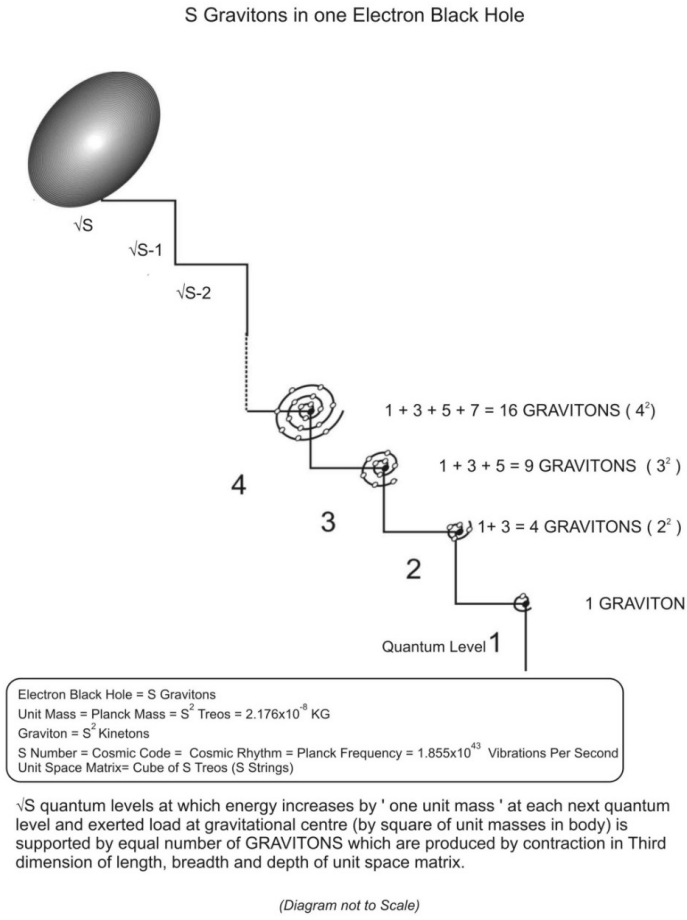
S Gravitons in one Electron Black Hole
√S
√S-1
√S-2
1 + 3 + 5 + 7 = 16 GRAVITONS (4²)
1 + 3 + 5 = 9 GRAVITONS (3²)
1+ 3 = 4 GRAVITONS (2²)
1 GRAVITON
4
3
2
Quantum Level 1
Electron Black Hole = S Gravitons
Unit Mass = Planck Mass = S² Treos = 2.176x10⁻⁸ KG
Graviton = S² Kinetons
S Number = Cosmic Code = Cosmic Rhythm = Planck Frequency = 1.855x10⁴³ Vibrations Per Second
Unit Space Matrix= Cube of S Treos (S Strings)
√S quantum levels at which energy increases by ' one unit mass ' at each next quantum level and exerted load at gravitational centre (by square of unit masses in body) is supported by equal number of GRAVITONS which are produced by contraction in Third dimension of length, breadth and depth of unit space matrix.
(Diagram not to Scale)

Figure 2.3: One unit mass (S x S free treos as one unit) increases at each of $\sqrt{S}$ quantum level, and the load of this body exerted at its gravitational centre in "square of unit masses in body" is supported by equal number of gravitons @ one unit mass per graviton along with its curled-up graviton coloumn.

The full contraction/deformation of 'one unit space matrix' (one cube of S bound treos on its each side), could only form just 'one electron black hole' (first time named, as it is equal in size to 'one unit electron', and both spread on $\sqrt{S}$ Bound treo layers) which can support approximately 'one billion metric ton' mass.

2.1.4 Deformation in Fourth Dimension.

To support even bigger, different sized 'cosmic bodies' made up of different mass energies (free treos), the deformation involves fourth dimension of 'time' as well and the deformation of SPACE-TIME occurs at $\sqrt{S}$ quantum levels of fourth dimension with deformation of multiple 'unit space matrix' each forming 'one electron black hole'. Any 'cosmic body', of 'n' unit masses exerts a *load of n^2 unit masses* at its one gravitational centre which is now *supported by n^2 numbers of gravitons* in its 'gravitational sphere', with the deformation of all four dimensions of space–time. With *increase of $\sqrt{S}$ unit masses (as one unit)* at each of $\sqrt{S}$ quantum levels in deformation of fourth dimension of space time, finally at last quantum level it forms S bound treo layered gravitational sphere ($\sqrt{S}$ bound treo layers are added at each quantum level × $\sqrt{S}$ quantum levels); and thus, S unit masses (10^{43} unit masses) in 'one unit black hole' is supported at its gravitational centre.

In the gravitational sphere (kinetic coloumn of fourth dimension), each next 'n^{th}' quantum level is formed by addition of one new layer (the 'n^{th}' layer) having 2n-1 'electron black holes' to support 'n^2' unit masses load (square of unit masses in body) of cosmic body at its gravitational centre. Sun the smaller cosmic body is made up of 10^{38} unit masses and is supported by 10^{38} bound treo layered* (3 Km diameter) gravitational sphere around its gravitational center, while our Earth made up of 10^{32} unit masses have even lesser 10^{32} bound treo layers [of 1 millimeter or about 0.04 inch in diameter] in its gravitational sphere.

* Same size of 3 km diameter 'gravitational sphere of Sun' is calculated in general theory by Einstein. Figure 2.4

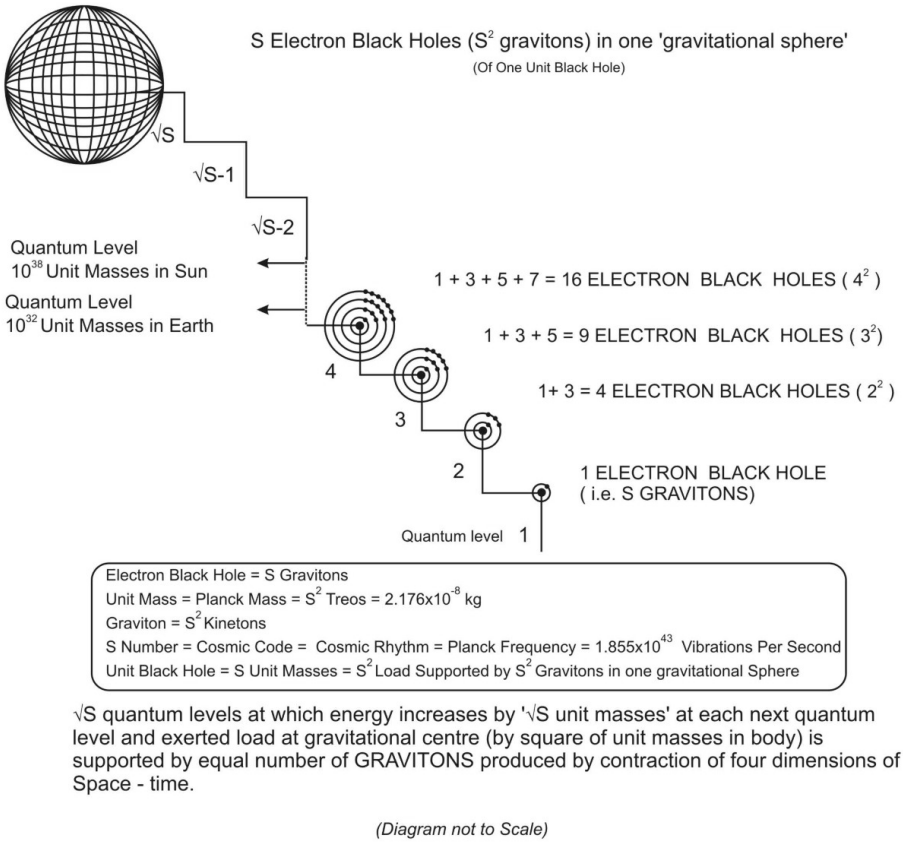
S Electron Black Holes (S² gravitons) in one 'gravitational sphere'
(Of One Unit Black Hole)
√S
√S-1
√S-2
Quantum Level
10³⁸ Unit Masses in Sun
Quantum Level
10³² Unit Masses in Earth
1 + 3 + 5 + 7 = 16 ELECTRON BLACK HOLES (4²)
1 + 3 + 5 = 9 ELECTRON BLACK HOLES (3²)
1+ 3 = 4 ELECTRON BLACK HOLES (2²)
4
3
2
1 ELECTRON BLACK HOLE
(i.e. S GRAVITONS)
Quantum level 1
Electron Black Hole = S Gravitons
Unit Mass = Planck Mass = S² Treos = 2.176x10⁻⁸ kg
Graviton = S² Kinetons
S Number = Cosmic Code = Cosmic Rhythm = Planck Frequency = 1.855x10⁴³ Vibrations Per Second
Unit Black Hole = S Unit Masses = S² Load Supported by S² Gravitons in one gravitational Sphere
√S quantum levels at which energy increases by '√S unit masses' at each next quantum level and exerted load at gravitational centre (by square of unit masses in body) is supported by equal number of GRAVITONS produced by contraction of four dimensions of Space - time.
(Diagram not to Scale)

Figure 2.4: √S unit masses (√S x S x S free treos) as one unit increases at each of √S quantum level, and the exerted load of this body at its gravitational centre, in "square of unit masses in body" is supported by equal number of gravitons. While all curled up 'graviton coloumns' of each 'graviton' present in 'solitary gravitational sphere' uncurls to form gravitational field of this cosmic body.

All n^2 graviton coloumns of 'n^2 gravitons present in 'n' layered gravitational sphere' of 'n' unit masses cosmic body together uncurl to form one 'n' × S bound treo layered spherical gravitational field of the body.

The position of any desired 'Gravitational field quantum level' in any gravitational field in any direction can be calculated by proposed formula in terms of bound treo layers = square of 'quantum level' number × number of unit masses in this body.

While at periphery of any gravitational sphere (in one plane) of any 'n unit mass cosmic body', there are 2n-1 gravitons in its outer most n^{th} layer in one plane. These 2n-1 graviton coloumns uncurl and join side by side *to further extend* the solitary gravitational field of this body, in one plane (to which we study).

The gravitational centre of any cosmic body, support the 'central M^2 load' of M unit masses body (as it is supported from all directions and in all plains), in any one plain will exert only 2MG (or 2 M number of free treos)* load at *any one layer* in gravitational field of body.

*[M is mass of body in Kg and G is Newton's universal gravitational constant; when both are multiplied as MG, it calculates the total number of free treos which forms this M unit mass body]

This 2 M free treos load at any one layer, is first supported by 2n-1 gravitons at outer most layer of gravitational sphere; and then by 2n-1 kinetic coloumn at each apex bound treo in its RC wavelength of wave *in any orbit* (in 'n^{th}' layer), in two-dimensional deformation of its gravitational field.

Sum of kinetic energy of v^2 × (2n-1) kinetons, in all these 2n-1 kinetic coloumns together form one 'gravitational wave' (on 2n-1 apex bound treos in any 'n^{th}' layer of gravitational field) to support this 2 M free treos load of body on this n^{th} layer.

Thus, each concentric circular layer of gravitational field by its one 'gravitational wave' can individually support load of 2 M (double the load of body e.g., sun), exerted load of body on any layer or orbit.

The gravitational field (coloumn) of any cosmic body gradually dilutes, from its four dimensional deformation in gravitational sphere, to *spherical three dimensional deformation* in which mass of body is accommodated (Thus, body of Sun and all cosmic bodies are spherical), then it dilutes to form *orbits in two dimensional deformation* (in which baby bodies, condenses typically 'at 10^{4th} gravitational field quantum level of parent body') and finally it dilutes in one dimensional deformation which extends (from gravitational centre) till it finally support exerted

minimal load of 'just one free treo' by one kineton in peripheral last layer of gravitational field of this cosmic body.

Newton's gravitational field equations,

$$MG = r^2 a = rv^2$$

only describes this one-dimensional gravitational field which extends (from gravitational centre) to 'n' x S bound treo layers at total $\sqrt{S}$ gravitational field quantum levels, of any 'n' unit masses cosmic body. While Einstein described the curvature of this deformed space-time which led to calculation of diameter of gravitational sphere of Sun as 3 Km by mathematical model in 'general theory of relativity', and same 3 Km sized gravitational sphere is calculated in terms of bound treo layers by this proposed 'geometrical treo model'.

You must note that any four-dimensional deformation on uncurling will reveal three dimensional deformations inside it, then two and finally one-dimensional deformation one inside other (like Russian dolls which are found one inside other).

2.1.5 Deformation in Fifth Dimension.

With *increase of mass in unit of one 'unit black hole'* at each of $\sqrt{S}$ quantum levels of fifth dimension the galactic centers of different sized all galaxies are formed at different quantum levels and finally one 'biggest super massive black hole' is formed which accommodates mass of $\sqrt{S}$ unit black holes with its load (in square) of S unit black holes at its gravitational centre at last $\sqrt{S}^{\text{th}}$ last quantum level of fifth dimension. The S unit black hole load will be supported by contraction of S^2 'unit Space matrixes' which come from 'one full sheet of our unit universe'.

In this deformation, the galactic center of our 'Milky Way galaxy' is formed at 20^{th} quantum level of fifth dimension which have approximately 20-unit black holes (4.2 million Sun masses), Figure 2.5.

Finally, after maximum contraction of space matrix in all five dimensions of 'space-time-energy', as only S^2 free treos or S^2 kinetons can

contract and accommodated in one cube of Planck least length, which is geometrically possible and thus, this geometrical treo model denies any further contraction of (local space or) mass energy of whole universe i.e., in one 'universal singularity' or contraction of universe only at a point. So, TREO MODEL explains 'universal singularity' is like 'gravitational singularity' in which all gravitons in a 'gravitational sphere' collect around its gravitational centre and supports the exerted load at its gravitational centre.

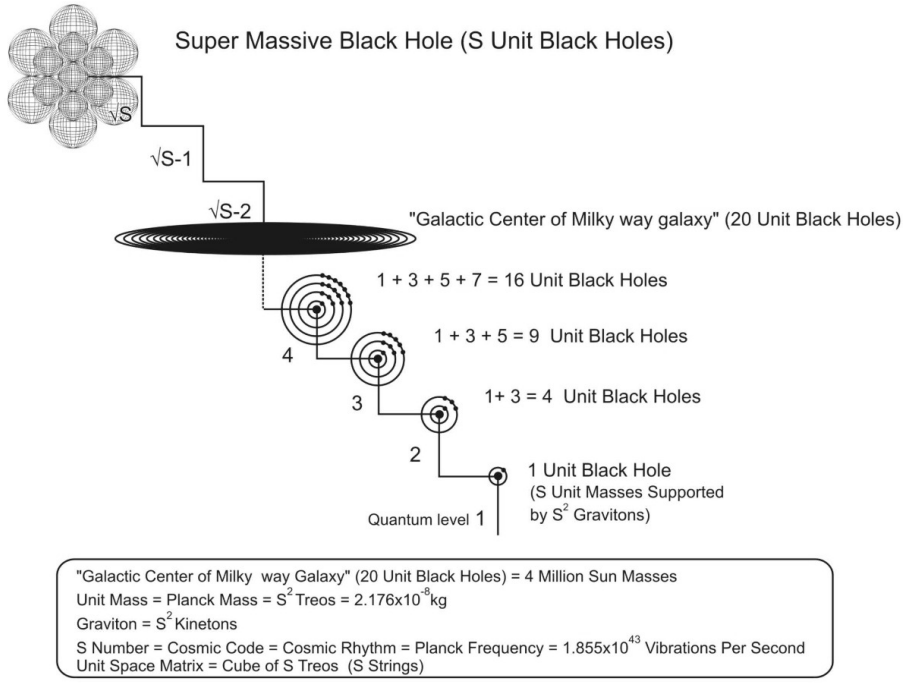
Super Massive Black Hole (S Unit Black Holes)
√S
√S-1
√S-2
"Galactic Center of Milky way galaxy" (20 Unit Black Holes)
1 + 3 + 5 + 7 = 16 Unit Black Holes
4
1 + 3 + 5 = 9 Unit Black Holes
3
1+ 3 = 4 Unit Black Holes
2
1 Unit Black Hole
(S Unit Masses Supported
by S² Gravitons)
Quantum level 1
"Galactic Center of Milky way Galaxy" (20 Unit Black Holes) = 4 Million Sun Masses
Unit Mass = Planck Mass = S² Treos = 2.176x10⁻⁸kg
Graviton = S² Kinetons
S Number = Cosmic Code = Cosmic Rhythm = Planck Frequency = 1.855x10⁴³ Vibrations Per Second
Unit Space Matrix = Cube of S Treos (S Strings)
Contraction of Fifth Dimension or Space Matrix (Space- Time- Energy) at √S quantum levels from S Unit Space Matrices to S² Unit Space Matrices in One SHEET of one Unit universe.
(Diagram not to Scale)

Figure 2.5: One-unit black hole (S x S x S free treos) as one unit increases at each of $\sqrt{S}$ quantum level, and the load exerted at galactic centre, of "square of Quantum level number of unit black holes" is supported by equal number of gravitational spheres where each 'one-unit black hole' is supported by its one full gravitational sphere. While one super massive black hole forms 'Gravitational singularity' with complete stoppage of time at its gravitational centre.

Now we will proceed to detail description of this contraction of space matrix in all five dimensions.

2.2 Unit Space Matrix.

S number is 'COSMIC CODE' which governs and carves our Quantum pendulum universe. The universe is vibrating S times per second at COSMIC RHYTHM. *These S vibrations quantities all three interdependent units of space-time-energy; as it demarcates; unit space, unit time and unit energy; to quantities all five dimensions of Space-matrix.*

UNIT SPACE, counted from the one point of load (one apex bound treo) anywhere on space matrix, and it is a cube with its each side of S number of bound treos, (the distance traveled by light in one second). A cube having S number of bound treos on its each side is ONE UNIT SPACE-MATRIX. S numbers of vibration which occur in time period of S number of Planck least times mark one UNIT TIME of one second. S number of free treos (EM Energy or Mass Energy) is one Quanta EM or Mass energy, is UNIT ACTION. S number of bound treos (after being converted in S kinetons) is one quantum kinetic energy, is required for one UNIT REACTION which is fully executed by S vibration (per second) in one Unit Time.

One quanta mass energy or S number of free treos (in one–unit photon) evenly spreads in a line on one side of this cube on S number of bound treos, where one free treo load on one (apex) bound treo is supported by one kineton, by its S vibrations which occur in one second, (or by any one vibration it is supported for the period of one Planck's least time only). Thus, after being supported with each vibration any photon packet is pushed from one bound treo to the next bound treo in the direction of motion; so, it travels at the speed of light.

This quantified one–unit space systematically contracts from any point, with increasing load at this point, and involves increasing number of dimensions of space-time, to produce fields of all four basic forces (EM force, weak and atomic forces and gravitational force).

Unit space matrix is a cube of S bound treos on its each side and can better be understood by simile of a book, that there is one line of S bound treos, S such lines in one page (sheet of S^2 bound treos), and S such pages are in one book (S^3 bound treos).

S vibrations which can affect only S number of bound treos (kinetons) in one dimensional deformation of length in UNIT TIME; with changing coloumn geometry in increasing number of dimensions, they will affect S^2 bound treos in two dimensional and S^3 bound treos in three-dimensional deformation of unit space matrix by same S number of vibrations per second.

Our universe is quantum universe, and our space is also quantified by S, S^2 and S^3 bound treos in one, two and three dimensions, which together form one cube of one unit space matrix, and it vibrates as one unit continuously by S vibrations (per second) per unit time.

With S number of such unit space matrixes are on each side of the biggest cube of one–unit quantum universe; or our functional universe which will have S unit space matrixes (S^2 bound treos) in its radius (as postulated/calculated).[2]

2 [1] If any part of universe still exist even beyond this limit of 'unit universe', it is a lost universe for observer; as the signal coming from outside this zone and trying to enter in, at the speed of light, will only hover at this point (as it will not be able to penetrate in and vice versa any signal will also not go out of universe) as this border of universe is itself racing out (swelling) at the speed of light. In this region the photons will orbit in a circular motion along periphery of universe, alike at 'Event horizon of a unit black hole'.

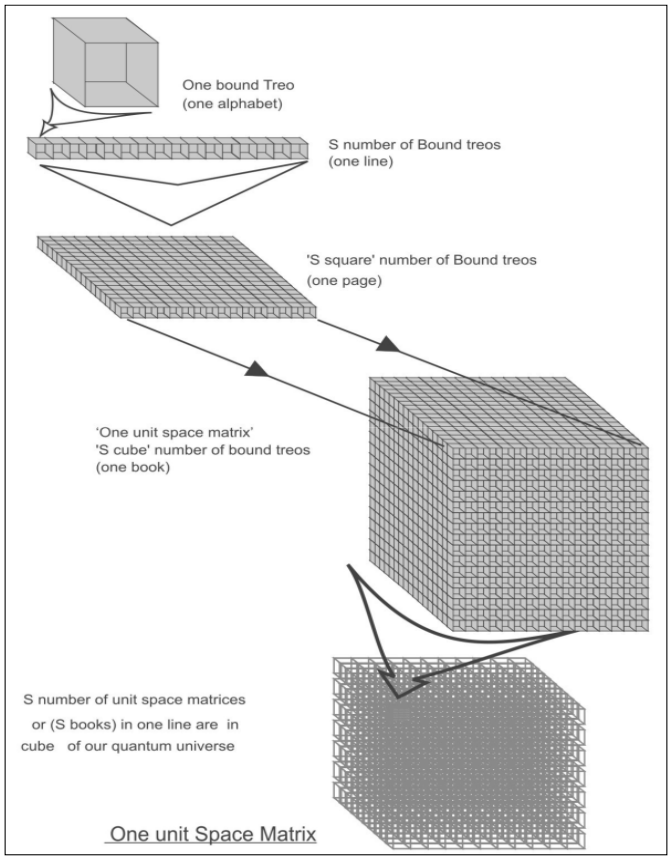
One bound Treo
(one alphabet)
S number of Bound treos
(one line)
'S square' number of Bound treos
(one page)
'One unit space matrix'
'S cube' number of bound treos
(one book)
S number of unit space matrices
or (S books) in one line are in
cube of our quantum universe
One unit Space Matrix

Figure 2.6: One Unit space matrix is a cube with S bound treos present on its one side. It can be understood by a book of S alphabets in one line, S such lines on one page, and S pages are in one book.

2.3 Coloumn Geometry

One kinetic coloumn forms at each apex bound treo along wavelength of photon packet or RC wavelength of elementary particle packet to support its exerted 'load'. Both Linear deformation and angular radial deformation occur simultaneously, but for sake of description they are described here separately.

2.3.1 Linear Deformation.

The photon packet and all elementary particles packet spreads on space matrix along a line, and *with its uniform packet density it exerts uniform*

equal 'load' on each (apex) bound treo along its wavelength. This 'load' (mass or momentum) is perceived as an action by each apex bound treo and reacted by formation of one 'kinetic Coloumn' from local space matrix. Kinetic coloumn made up of equal number of kinetons are formed to support this 'load' at each apex bound treo, and thus, 'each one free treo 'load' is supported by one kineton'.

Formation of Kinetic coloumns in deformation of first dimension of length (Quantum world).

In deformation of first dimension, with increasing mass energy by one quantum (S free treos as EM energy) at each next quantum level will form bigger photon packets, and at any 'nth' quantum level, the photon packet of 'n' quanta mass energy will spread in one line on each apex bound treos along its gradually reducing wavelength.

$$wavelength\ \lambda = \frac{\text{S bound treo}}{\text{'n' quanta EM energy in photon packet}}$$

and thus, with increasing EM energy and decreasing wavelength, it exerts a uniform load of n^2 *free treos* at each apex bound treo on its line of spread i.e., its wavelength. With increase of one more quantum mass energy which generates one new photon packet at next 'nth' new quantum level, one new layer is added having (2n–1 kinetons), while each 'n' layered kinetic coloumn (formed as one on each apex bound treo along its wavelength), will now have n^2 kineton to support this n^2 free treos exerted load (square of 'nth' quantum level) of this or any 'n' quanta EM energy photon packet.

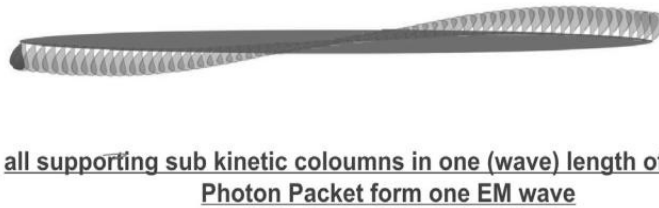

Figure 2.7: Photon packet uniformly spreads and exerts a uniform load on each apex bound treo along its wavelength and then one Sub- kinetic on each apex bound treo supports this exerted load, while all kinetic coloumns together form its one EM wave (Diagrammatic).

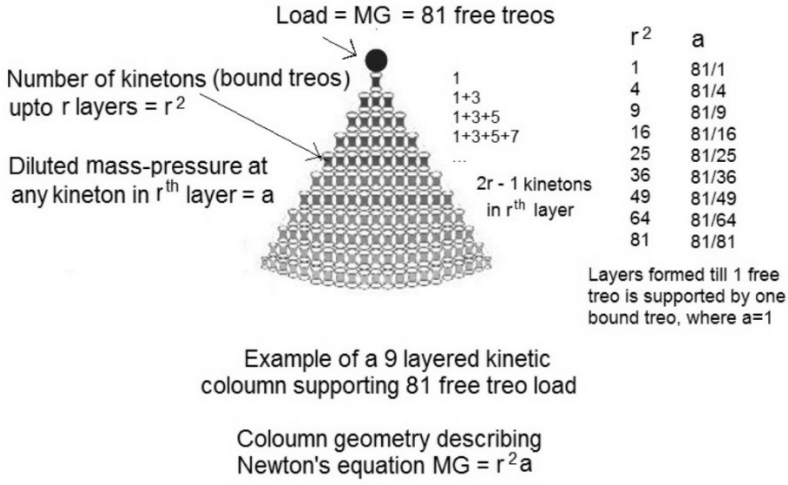
Load = MG = 81 free treos
Number of kinetons (bound treos) upto r layers = r 2
Diluted mass-pressure at any kineton in r th layer = a
1
1+3
1+3+5
1+3+5+7
...
2r - 1 kinetons in r th layer
r 2 a
1 81/1
4 81/4
9 81/9
16 81/16
25 81/25
36 81/36
49 81/49
64 81/64
81 81/81
Layers formed till 1 free treo is supported by one bound treo, where a=1
Example of a 9 layered kinetic coloumn supporting 81 free treo load
Coloumn geometry describing Newton's equation MG = r 2a

Figure 2.8: This one Sub kinetic coloumn (Kinetic coloumn of first dimensional deformation) describes geometry of 'transverse EM waves and also one-dimensional gravitational field's geometry'.

In this diagram we took the example of a '9 quanta photon packet', placed at 9^{th} quantum level of first dimension. To support its load of 9^2 free treos (81 free treos i.e., in square) similar kinetic coloumn forms on each apex bound treo in wavelength. This one sub kinetic coloumn will have 9^2 kinetons in these 9 layered sub-kinetic coloumn (1+3+5+7+9+11+13+15+17 = 81 kinetons or 9^2 kinetons). The proposed Coloumn geometry (**2n-1 in any one layer and n^2 in any n layered kinetic coloumn**) is valid in respective kinetic coloumns which form in all four dimensions. The total 'n' number of layers in 'kinetic coloumn' of this 'n' quanta mass energy denotes *'n' frequency of wave* (or number of waves per second) and the *'n' amplitude of wave*.

Formation of kinetic coloumns in two dimensional deformations of length and breadth (Quantum world).

In contrast to first dimensional deformation, where mass energy was increasing by one quantum at each next quantum level; in the deformation of second dimension, the 'mass energy' in new packet increases by one 'unit electron mass' or by $\sqrt{S}$ quanta (i.e., $\sqrt{S}$ × S free treos) at each of total $\sqrt{S}$ quantum levels of second dimension.

One sub kinetic coloumn of first dimension is replaced by *one rotating Shell* in second dimension, and in place of one kineton layer it is now *one sub shell* (each sub shell is made up of $\sqrt{S}$ bound treo layers), and in place of 2n-1 kinetons *2n-1 orbitums* are in each 'nth' sub shell of each shell.

Any *'n' unit electron mass energy packet*, of any elementary particle at 'nth' quantum level of second dimension, will spread on its RC wavelength (S number of bound treos/number of quanta mass energy in packet). It will now exert load of n^2 *quanta free treos load* at each apex bound treos (square of 'nth' quantum level of second dimension), thus, all shells (kinetic coloumn of second dimension) one on each apex bound treo along vertical RC wavelength of matter wave at 'nth' quantum level of second dimension, will have 'n' sub shells and total n^2 orbitums; to support this load.

In two (second) dimensional deformations at each next new 'nth' quantum level, the additional 2n–1 quantum load is supported by addition of 2n–1 orbitums in *one new* 'nth' sub shell, which is added in each shell, formed at each apex bound treo along wavelength. Each orbitum is made up of one quantum kinetic energy or S kinetons. Thus, at first four quantum levels it will form one, three, five, seven orbitums (i.e., 2n-1 orbitums) with successive addition of first, second, third and fourth sub shell in each shell present at each apex bound treo all along its vertical RC wavelength. (Fig. 3.12).

Finally at last quantum level, $\sqrt{S}$ unit electrons mass energy or S quanta mass energy of 'one–unit mass' is supported by addition of one $\sqrt{S}$ th sub shell, having $2\sqrt{S}$ -1 orbitums (2n-1) in this last one shell on one apex bound treo or at its 'unit gravitational centre' (as RC wavelength reduces to just one bound treo according to proposed formula).

Thus, at this last quantum level of second dimension one biggest *S layered* (as $\sqrt{S}$ bound treo layers increased at each of $\sqrt{S}$ quantum levels) with $\sqrt{S}$ sub shells one full 'graviton coloumn', forms to support one unit mass (one Planck mass) with total deformation of second dimension at one 'unit gravitational center' of one graviton with its S^2 kinetons in its 'one graviton coloumn'.

In second dimension the *total number of bound treo layers* (remember new $\sqrt{S}$ bound treo layers are increased to form one new sub shell, at each next quantum level of second dimension) in each shell *decides frequency of wave*, which is equal to the *number of quanta mass energy* in this elementary particle packet.

Unit mass (Planck's mass) ***is maximum load*** which can be supported *at one point* (one bound treo) at its 'unit gravitational centre' by space matrix with one graviton by it is one 'graviton coloumn'.

Formation of Kinetic coloumns in Three-dimensional deformation of unit Space matrix (general theory).

(In increasing three dimensional deformations it is formation of one 'electron black hole', which supports the bodies from 'one-unit mass' to 'one billion metric ton', on its 1 to $\sqrt{S}$ spiral layers)

One unit mass is the largest load which can be supported in universe at 'one apex bound treo or unit gravitational centre' by one graviton by its one graviton coloumn. Therefore, 'n' unit mass body, which exert 'n^2' unit masses load (square number of unit masses in body) at its gravitational centre, is supported by equal number of 'n^2' gravitons; in 'n' spiral layered kinetic coloumn of one electron black hole (kinetic coloumn which forms by full deformation of one unit space matrix in all three dimensions of length, breadth and depth). In this kinetic coloumn gravitons are arranged according to proposed coloumn geometry in $\sqrt{S}$ spiral layers (1+3+5+7 and 2n-1 in any 'n^{th}' spiral layer) of one full kinetic coloumn (electron black hole) to support maximum ≈ one billion metric ton (of $\sqrt{S}$ unit masses body). This full kinetic coloumn **(electron black hole)** will have $\sqrt{S}$ bound treo spiral layers (as it is equal in size of $\sqrt{S}$ bound treo length of one unit Electron; so, such named by author) and have S number of gravitons i.e., $(\sqrt{S})^2$ gravitons.

Formation of Kinetic coloumn in four-dimensional deformation of Space-time (i.e., gravitational sphere) around gravitational centre of all cosmic bodies (general theory).

Similarly in one biggest gravitational sphere i.e., 'full kinetic coloumn of fourth dimensional deformation', will have S number of 'Electron black holes' at its $\sqrt{S}$ quantum levels in its S number of bound treo layers ($\sqrt{S}$ quantum levels × $\sqrt{S}$ bound treo layered each row of 2n-1 'electron black holes'). This full gravitational sphere of 'S bound treo layers in its radius' will support the 'S^2 unit masses load at gravitational centre, by S^2 Gravitons (in all S 'Electron black holes') in this gravitational sphere of one UNIT BLACK HOLE.

2.3.2 Coloumn geometry which is valid in all four dimensions (unification).

The coloumn geometry (2n-1 units in any 'n^{th}' layer and n^2 units in any 'n' layered kinetic coloumn) is obeyed in the deformation of all four dimensions and as such, there are 2n–1 unit, which increase at each 'n^{th}' quantum level (while total $\sqrt{S}$ quantum levels are in each dimension) and thus, total n^2 units are in any 'n' layered kinetic coloumn.

These 2n-1 units which increases at each 'n^{th}' quantum level in kinetic coloumns of all four dimensions; these are **kineton** (1 deformed bound treo) in first dimension, **orbitum** (made up of S kinetons) in second, **graviton** (made up of S^2 kinetons) in third and finally '**electron black hole'** (made up of S^3 kinetons) in fourth dimensional deformational.

Along with this 'linear deformation' proportionate 'Angular radial deformation' is also occurring. Thus, with this increasing angular momentum, all the kinetic coloumns supporting this load from one direction rotates with each vibration to support this load *from all directions with time* and thus, they form EM waves, matter waves, gravitational fields and gravitational spheres. All these rotating layers of kinetic coloumns also form 'lines of forces' to generate magnetic fields.

All thermodynamic, kinetic or chemical energy transfers are transfer of *full layers of kinetic coloumn* from the kinetic coloumns of donating body to the kinetic coloumns of receiving body.

2.3.3 What is Denoted by Reduced Planck constant and Planck constant.

All Photons are packets of integral multiple of one quantum EM energy (S number of free treos) which increases at each of $\sqrt{S}$ quantum levels to form all $\sqrt{S}$ type of photon packets. These photons can be divided according to its uses and properties and form the entire EM spectrum.

In all photon packets the E = *h*ν; where E (EM energy) = *h* (Planck constant) × *ν* (frequency of wave). The 1 frequency (and 1 unit EM energy) photon is $h\nu_1$, and similarly $h\nu_2$ is packet with frequency 2, and so on.... $h\nu_3$, $h\nu_4$, $h\nu_n$(or any n number) up to biggest gamma photon which is of $h\nu\sqrt{S}$ energy.

In the above relation of E = *hν*, if wavelength of any photon packet is equal to the speed of light (i.e., wavelength of unit photon is S bound treo distance i.e., distance traveled by light in one second) then its frequency *ν* will be 1. *Now EM energy of photon packet of frequency 1 will be equal to value of Planck constant E=h.*

What is Denoted by Reduced Planck constant and Planck constant.

The S number of free treos or $1.85485844 \times 10^{43}$ free treos is one quantum EM energy. These S free treos or one quantum EM energy (of a unit photon) is the value of Reduced Planck constant (*ħ* bar) and angular momentum of this one quantum EM energy is the value of Planck constant $h = \hbar \times (2\pi)$. This one quantum EM energy (value of Reduced Planck constant *ħ*) produces unit action and deforms just one bound treo layer of unit space matrix and its one-unit angular momentum (value of *h*; Planck constant) produces one EM wave in one second (Figure 2.9).

THUS, 'PLANCK CONSTANT' CALIBRATES LAYER BY LAYER DEFORMATION OF UNIT SPACE MATRIX.

- Reduced Planck constant is *Energy of 'one quantum mass'* which is value of 'Quanta of unit action' or 'unit minimum action' = $1.0545718 \times 10^{-34}$ Joule sec. (conventional Co-data 2018 value of Reduced Planck constant)

- *Planck constant is the angular momentum of this 'one quantum mass–energy'* which produces one EM wave in one second. 6.626070×10^{-34} Joule sec. (Conventional Co-data 2018 value of Planck constant)
- If we divide conventional value of Planck constant by 2π 6.626070×10^{-34} Joule/6.28318531 (value of 2π)

  $= 1.05457179 \times 10^{-34}$ Joule (We get conventional value of 'Reduced Planck Constant per second')

- If we calculate the Mass of this energy ($m = E/c^2$); $1.05457179 \times 10^{-34}$ Joule/$(2.99792458 \times 10^8$ meter per second$)^2$

  $= 1.17336936 \times 10^{-51}$ kg (We get mass of one quantum EM energy)

- Number of free treos in this one quanta mass energy; 1.173369×10^{-51} kg $\times$ 1.5808×10^{94} (number of free treos in one Kg)* = 1.855×10^{43} treos (S number of free treos)**

  * See calculations of ' new derived value of gravitational constant' page 135.

  ** S free treos = one quantum EM energy, which is present in unit photon.

2.3.4 Quantum Gravitation in first and second dimensional deformation (Quantum gravity).

Each One free treo load, is supported by one kineton, by its one vibration, for the period of one vibration, which occurs after a time gap of Planck's least time and such total S vibrations in one second will support this free treo for a period of one second (continuously).

Finally, the load of S quanta mass energy (S × S free treos) in one 'unit mass' is supported by total S orbitums (S × S kinetons) which are formed in ($\sqrt{S}$ sub shells), up to last deformed layer of full one graviton coloumn. **Each orbitum supports its one quantum load** by S vibrations in one second. It also explains the principal of equivalence, as why number of free treos (which decides its gravitational mass) are always equal to kinetons (which decides its kinetic mass).

2.3.5 Angular radial deformation.

With increasing mass energy by one quantum (value of reduced Planck constant) in each next bigger photon packets at each next quantum level in first dimension; one more layer is added in its all supporting sub kinetic coloumns (present at each apex bound treo in its entire wavelength) and thus, one layered to $\sqrt{S}$ layered sub kinetic coloumns are formed. With increase of this one layer in all sub- kinetic coloumns the angular momentum of packet (Planck constant) and frequency of its wave also increases by one unit; thus, Planck constant '*h*' calibrates layer by layer deformation of space matrix in first dimension.

Similarly, in the second dimensional deformation the *frequency increases by* $\sqrt{S}$ *number at each next quantum level*, along with addition of $\sqrt{S}$ bound treo layers (which are required to form one new 'sub shell' in each shell) at each next 'nth' quantum level of second dimension, and the angular momentum increases by $\sqrt{S}$ units.

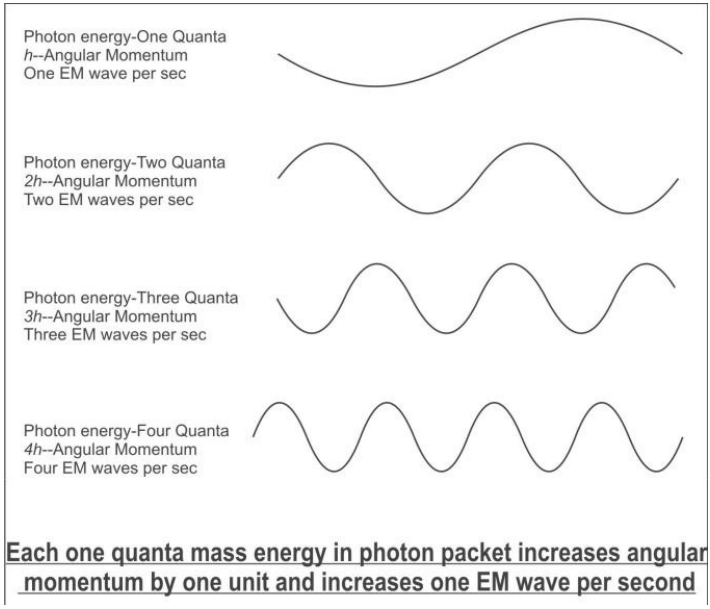
Photon energy-One Quanta
h--Angular Momentum
One EM wave per sec
Photon energy-Two Quanta
2h--Angular Momentum
Two EM waves per sec
Photon energy-Three Quanta
3h--Angular Momentum
Three EM waves per sec
Photon energy-Four Quanta
4h--Angular Momentum
Four EM waves per sec
Each one quanta mass energy in photon packet increases angular momentum by one unit and increases one EM wave per second

Figure 2.9: Changing wave pattern with increasing angular momentum by one unit due to increasing mass energy in photon packet by one quantum.

The radius of shell also increases by $\sqrt{S}$ bound treo layers, at each 'n th' quantum level; where 'n' can be any integral number, 1, 2, 3 ....and $\sqrt{S}$, up to last $\sqrt{S}$ quantum level.

With this increasing angular momentum, the 'kinetic coloumns' turn from 0–90 degree, 90–180 degree, from 180–270 and finally from 270–360 degree, respectively in one, two, three and four–dimensional deformation of space matrix.

2.3.6 Proofs in Favor of proposed 'Coloumn Geometry'.

The gravitational force, intensity of light, and charge density all fade by 'reciprocal of the square of its distance', which indicates that the force fields are made according to this proposed 'coloumn geometry' (force is inversely proportional to square of distance).

And there are direct proof with the distribution of electrons in *s, 3p, 5d, 7f* electron orbits in sub shells of shell which form atomic structure, and all elements of periodic table are formed by *filling of empty electron orbits in 4 pairs of quantum entangled shells* which are placed at four quantum levels according to this proposed coloumn geometry. (Figure 3.9)

This 'coloumn geometry' is also seen in the formation of 'gravitational field (coloumn) of a body' where Newton's gravitational field equations ($MG = r^2 a$) only describes the 'load distribution pattern in gravitational (coloumn) field'.

In the gravitational field of body, gravitational kinetic energy, v^2 decreases by 'reciprocal to its distance from its gravitational centre', is also in accordance with the coloumn geometry ($v^2 = MG/r$). (In this equation v^2 is total number of kinetons in one v layered sub kinetic coloumn). This v is *frequency* of wave, which is equal to the *number of layers* in each kinetic coloumn and equal to the *'bound treos distance per second' by which the baby body will move in its orbit* in one second.

Any baby body will produce elliptical orbits in gravitational field, and thus, motion of all planets is in 'elliptical orbits' as they move in a 'solar gravitational coloumn (field)'. It is again due to the distribution of gravitational kinetic energy in gravitational field as per 'coloumn geometry'.

All main baby bodies are placed between 10^{4th} to 10^{5th} quantum levels of gravitational field of parent body.

e.g., satellites of 'outer Planets' [Reference 9], planets of solar system, page 143, all 7 baby bodies of star Trappist 1 (37 light years away) are calculated [Reference 10] and found to be placed at 10^{4th} quantum level in the gravitational field of its parent body. The position of these baby bodies and their speed of revolution in their orbits verifies the proposed 'coloumn geometry' and proposed Treo model.

According to Schrödinger's equations for motion of a linear harmonic oscillator in second dimension i.e., any moving load produces ripples at distance of 1, 3, 5, 7, 9, 11, 13, 15 units, the *same pattern decides quantum levels in gravitational field* of any parent body. Thus, Schrödinger's equations describe coloumn geometry as the formation of orbits and atomic structure is governed by these equations.[3]

2.3.7 Wavelength and frequency in one and two-Dimensional deformation (quantum world).

Reducing Wavelengths and its implications

To support all $\sqrt{S}$ type of photons of EM spectrum, at $\sqrt{S}$ quantum levels in deformation of first dimension of length, *EM waves* are formed in space matrix, while at $\sqrt{S}$ quantum levels it forms *matter waves* for all elementary particles in deformation of two dimensions of length and breadth of unit space matrix.

Photons and all elementary packets are not point masses, but in fact they exhibit *wave-particle duality* as they all spread and distribute their EM/mass energy equally at each apex bound treo along its entire Reduced Compton (RC) wavelength, to produce EM waves and Matter waves respectively, on their gradually decreasing wavelengths.

---

3 [3] Schrödinger's equations for motion of a linear harmonic oscillator can be calculated and so on 1,3,5,7, 9,11,13,15 .... Proper values of a/b are given by 2n+1 (n is an integer), the value of Y corresponds to characteristics 'eigen- functions' while 'eigen value' is wavelength (length) of elementary particle.

This length of spread of packet, in first dimension as its wavelength gradually reduces **from S bound treo** (wavelength of unit photon) to $\sqrt{S}$ bound treos (to wavelength of gamma Photon), while in second dimension the spread of elementary particle is on its reducing respective RC wavelength, it further reduces from $\sqrt{S}$ bound treos of one-unit Electron, **to just 1 bound treo** of one-unit mass.

Thus, along with increasing EM/mass-energy at each next quantum level, the *contraction of packets and its condensation on its reducing wavelengths continues* both in first and second dimension and finally S^2 free treos or S quanta mass-energy of unit mass, contracts and exert its total load on its *one* gravitational centre, which is supported by one graviton with its S^2 kinetons in its 'one graviton coloumn'.

At any quantum level, with reducing wavelength (and increasing mass-energy in packet) the exerted load at each apex bound treo in wavelength increases in free treo square (n^2 free treos) in first dimension and with further reducing RC wavelength in second dimension at each apex bound treo the load exerted is quanta square (n^2 quanta), at any 'n^{th}' quantum level. Number of layers in one kinetic coloumn × number of kinetic coloumns; one on each apex bound treo forming one EM wave = S number of layers of one EM wave in first dimensional deformation which supports *one quantum EM energy* on one EM wave.

The total number of quanta EM energy in any photon packet is supported in *one unit time of one second* by equal number EM waves which form in one second. In the first dimension all rotating sub kinetic coloumns jointly produce one transverse EM wave, which supports *one quantum EM energy*, while in second dimension each orbitum rotating in S planes, once per second, individually support *one quantum mass energy*.

Common formula, to calculate length of spread of photon in first and elementary particles on RC wavelength in second dimension.

Length of spread of packet on number of 'apex bound treos' in wavelength (RC wavelength) = S bound treos length (i.e., speed of light) is divided by number of quanta mass energy or EM energy in this Packet.

Thus, with increase of each quantum of mass energy, the photon packet contracts on decreasing length of deformation of horizontal rows at each next quantum level (see below deformation in first dimension on page 63), along with their increasing slope in 1st dimension.

While in two-dimensional deformation continuously smaller orbits (two dimensional structures) form with *gradually increasing depth and with reduction of its circumference of each orbit (forming this pit)* gradually contracts on decreasing Compton wavelength, i.e., 2 times Reduced Compton(RC) wavelength × π ; (equal to circumference of orbit) of matter wave.

As the uniform packet density of any photon or elementary particle is commonly not observed, as mentioned above, and the *un-uniform 'packet density'* (with ***uncertain*** amplitudes or frequencies and wave lengths) *in packets invites HEISENBERG UNCERTAINTIES.*

One photon with spin 1 will spread on its one EM wave and will perform one rotation to regain its initial orientation.

Frequency.

The *number of quanta mass energy* in any packet, decide the FREQUENCY of wave both in first and second dimension, which is also equal to the *number of bound treo layers* in each one sub-kinetic coloumn in first dimension (which decides amplitude and frequency of EM wave) or number of bound treo layers which form each one shell present along the Reduced Compton wavelength of packet.

The *orbital speed* of revolution of anybody (electron, elementary particle, planet or satellite) is always equal to the frequency of its matter wave at this quantum level in its orbit.

THUS, Frequency of wave of any photon, electron or any elementary particle packet is always equal to the number of quanta mass energy in its

packet = or also equal to number of rotations photon packet will perform in one second = or number of EM waves formed in one second = or equal to number of bound treo layers deformed in one Sub kinetic coloumn or in one shell, up to this particular quantum level = total Number of orbitums formed in this matter wave = and also equal to the number of bound treo distance this packet will move in its orbital motion in second dimensional deformation.

In deformation of second dimension if 'n' is 'Reduced Compton wavelength' (where 'n' is half of the length of its wave), while this wave is formed on 2n–1 kinetons; and (2n–1) × π is angular momentum of this mass energy packet which decides the circumference of orbit, or Compton wavelength of wave. One Electron (or any packets in second dimensional deformation) will spread on its half wave along its RC wavelength and with ½ spin, it will perform 2 rotations to regain its orientation on 2 RC wavelength on its one full matter wave.

Calculations to verify.

We will verify all above statements, with example of Wavelength of unit electron.

- **Reduced Compton(RC) wavelength** of 0.51 MeV unit Electron.

  = 0.38615926796 × 10^{-12} m (conventional value)

  = 23.797258 × 10^{21} Bound treos length (after conversion).

This can also be calculated by this new proposed formula:

$$\text{RC Wavelength} = \frac{\text{S bound treo distance}}{\sqrt{S}\ \text{quanta mass energy in electron packet}}$$

$$= \frac{1.855394419\times10^{43}\ \text{bound treo distance}}{0.779667093\times10^{21}\ \text{quanta electron}\left(of\ \sqrt{S}\ quanta\right)}$$

$$= 23.797258\times10^{21}\ \text{bound treos length} \qquad (2.1)$$

- **Compton wavelength** of 0.51 MeV electron:

  =2.42728683(11) × 10^{-12} m [CO-DATA 2018 value]

  = 1.50179695 × 10^{23} bound treo distance (after conversion).

- Twice of Reduced Compton wavelength, which form one wave when multiplied by π, equates to **circumference of orbit or its Compton wavelength.**

  $2 \times 23.797258 \times 10^{21}$ bound treos length × π
  = $1.50179695 \times 10^{23}$ bound treo length, which is same as CO-DATA value.

- Reduced Compton wavelength × mass-energy of electron (or of any elementary particle) is same as S^2 free treos; as shown.

  = 23.797258×10^{21} bound treos wavelength × $1.439491604 \times 10^{64}$ free treos in unit electron packet = 3.4×10^{86} = S^2 free treos (= S^2 kinetons as Ground energy of second dimension).

Inferences

- If Reduced Compton wavelength is 'n' then
- 2 × Reduced Compton wavelength = 2n-1 bound treos on which it forms one wave in an arc in $1/3^{rd}$ circumference of circle. Further, 2n-1 bound treos × π = Compton wavelength, is circumference of this circle.

Chapter 3

Changing Geometry with Step-by-Step Increasing Deformation of Space Matrix

3.1 Deformation in One dimension of Length of one unit space matrix.

(To support all types of Photon packets from unit Photon to gamma photon)

We know that the fields of EM force are formed by transverse EM waves in which electrical and magnetic vectors are at 90 degrees to each other as rotating layers of kinetic coloumn forms magnetic fields. According to the proposed model the *electrical vector is manifested by moving free treos* in packet, while vertically placed *revolving and supporting layers of kinetic coloumns generates magnetic field*.

The load of any photon packet is shared as it spreads on space matrix. Any photon packet will spread along its wavelength (of S bound treo/number of quanta in photon packet) and thus, exerted load of any number of free treos (according to its photon packet density) at each apex bound treo, is supported by one *sub kinetic coloumn* having equal number of kinetons.

At first quantum level ('n'=1), one quantum mass energy (S free treos in unit photon) spreads on S number of apex bound treos along its wavelength according to above formula. Now at each apex bound the load is one free treo, which is supported by one kinetic coloumn having one kineton in one layer.

At second quantum level ('n'=2), two quanta mass energy photon packet will spread on half i.e., S/2 apex bound treos in wavelength and will exert a 'load' of 4 or 2^2 free treos (as double EM energy spreads on half length), at each apex bound in this wavelength. This load of 4 free treo is supported by 4 kinetons in one sub kinetic coloumn (1+3=4) which have one kineton in its first layer and three kinetons in its second layer. I.e., 3= 2 × 2 – 1(or 2 n – 1 in any 'n' th layer)

At third quantum level ('n'=3), three quanta photon packet will spread on S/3 apex bound treos in wavelength and thus, will exert a 'load' of 9 or 3^2 free treos on each apex bound treo in this wavelength (as three times EM energy spreads on 1/3 rd length). At each apex bound treo it will form one sub kinetic coloumn having a total of 3^2 kinetons (1 + 3 + 5 = 9) in this three layered kinetic coloumn.

Similarly, at Fourth quantum level ('n'=4), Four quanta photon packet spreads on S/4 apex bound treos in wavelength and exert a 'load' of 16 or 4^2 free treos at each apex bound treo, which is supported by one kinetic coloumn of 16 kinetons, having one kineton in its first layer, three kinetons in its second layer, five kinetons in third and seven kinetons i.e., 7 (2 n – 1 in any n th layer) in its fourth layer. Thus, a total of 4^2 kinetons (1+3+5+7 = 16 or 4^2) are in each four layered sub- kinetic coloumn, which forms on (each of) S/4 apex bound treos.

To support this increasing load of n^2 free treos at any 'n' th quantum level, one new layer of 2n –1 kinetons is added at each quantum level in each Sub kinetic coloumn; thus, any n layered sub kinetic coloumn, will have equal number of n^2 supporting kinetons.

Similarly, at last or $\sqrt{S}$ th quantum level ($n=\sqrt{S}$), for $\sqrt{S}$ quanta photon packet $\sqrt{S}$ layered sub kinetic coloumns (of S kinetons) are formed at each apex bound treo along its $\sqrt{S}$ bound treos wavelength.

3.1.1 First Quantum Level of First Dimensional deformation.

(Deformation of 1 Row of S Bound Treos)

S free treos in 'unit photon packet' spreads on S bound treos length on one layer on one side of unit space matrix. It will exert a uniform load of one free treo to be supported by S number of one layered sub kinetic coloumns in this wavelength. Thus, the total of S free treos in unit photon packet are supported by one row of S kinetons of unit space matrix (Figure 3.1). One EM wave is shown in (Figure 3.2). One free treo is supported by one kineton in one layered sub kinetic coloumns on each apex bound treo in wavelength.

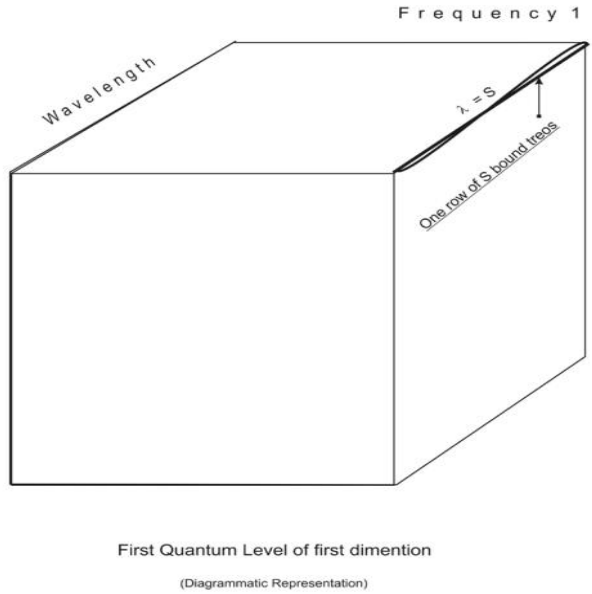

Figure 3.1: First quantum level in deformation of first dimension in length of unit space matrix. 1 full row of S bound treos deforms.

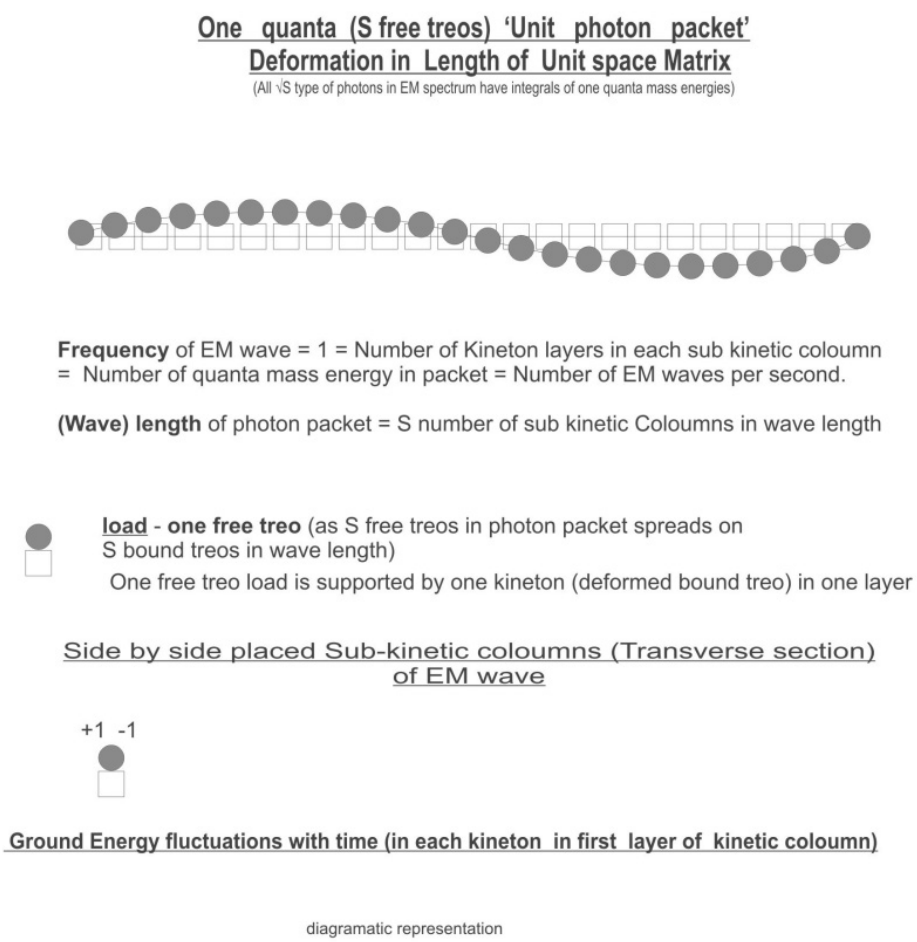
One quanta (S free treos) 'Unit photon packet'
Deformation in Length of Unit space Matrix
(All √S type of photons in EM spectrum have integrals of one quanta mass energies)
Frequency of EM wave = 1 = Number of Kineton layers in each sub kinetic coloumn
= Number of quanta mass energy in packet = Number of EM waves per second.
(Wave) length of photon packet = S number of sub kinetic Coloumns in wave length
load - one free treo (as S free treos in photon packet spreads on
S bound treos in wave length)
One free treo load is supported by one kineton (deformed bound treo) in one layer
Side by side placed Sub-kinetic coloumns (Transverse section)
of EM wave
+1 -1
Ground Energy fluctuations with time (in each kineton in first layer of kinetic coloumn)
diagramatic representation

Figure 3.2: First quantum level in deformation of first dimension in length. With 1 unit action and 1 angular momentum, 1 wave will form. 1 Kineton is in one layered each kinetic coloumn present on each apex bound treo in its S bound treos wavelength.

With 1 unit action and 1 angular momentum, 1 wave will form. 1 Kineton is in one layered each kinetic coloumn which are present as one at each apex bound treo in its S bound treos wavelength.

3.1.2 Second Quantum level of First Dimensional deformation.

(3 Rows each of S/2 bound treos length are added in Deformation)

Two quanta (or 2 × S free treos) is EM energy of 'two quanta photon packet', and according to formula S/2 bound treos is (wavelength= S bound treo/2

quanta mass energy in packet) length of spread of (contracted) new photon packet on its reduced wavelength.

Thus, 2 × S free treos in photon packet, will uniformly spread on S/2 bound treo wavelength, and will exert a uniform load of 4 free treo at each of S/2 apex bound treos in wavelength, where its 4 free treo load is supported by 4 Kinetons or 2^2 kinetons, in two layered (1 + 3 kinetons) total S/2 sub kinetic coloumns.

Thus, to form all S/2 sub kinetic coloumns in wavelength, 1 row of S bound treos is already deformed and now 3 new rows each of S/2 bound treos will add in deformation. (Figure 3.3)

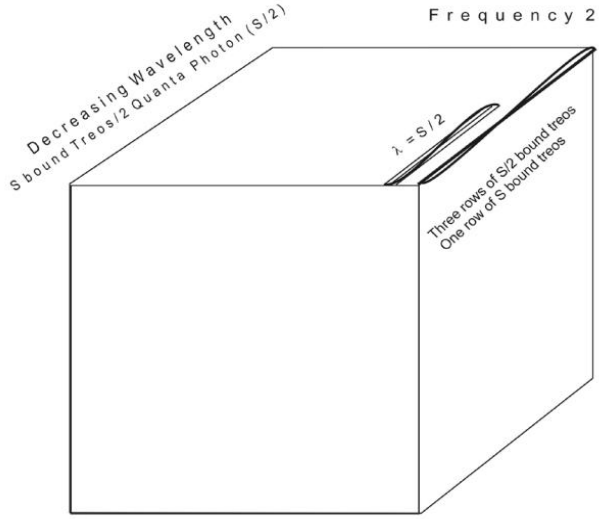
Frequency 2
Decreasing Wavelength
S bound Treos/2 Quanta Photon (S/2)
λ = S/2
Three rows of S/2 bound treos
One row of S bound treos
Second quantum level of First Dimension
(Diagrammatic Representation)

Figure 3.3: Second quantum level in deformation of first dimension in length: additional deformation of 3 rows of S/2 bound treos is needed to form two layered (1 + 3 kinetons) in all sub kinetic coloumns which form at each apex bound treo in wavelength.

While 2 quanta mass energy is in this 'two quanta photon packet' and 2 layers are in each sub kinetic coloumn, 2 is frequency of this wave and

with 2-unit angular momentum it will form 2 EM waves in one second. One wave is shown in (Fig. 3.4) 4 free treos are supported at each apex bound treo by 4 kinetons in two layers (1+3 kinetons) in each sub-kinetic coloumn.

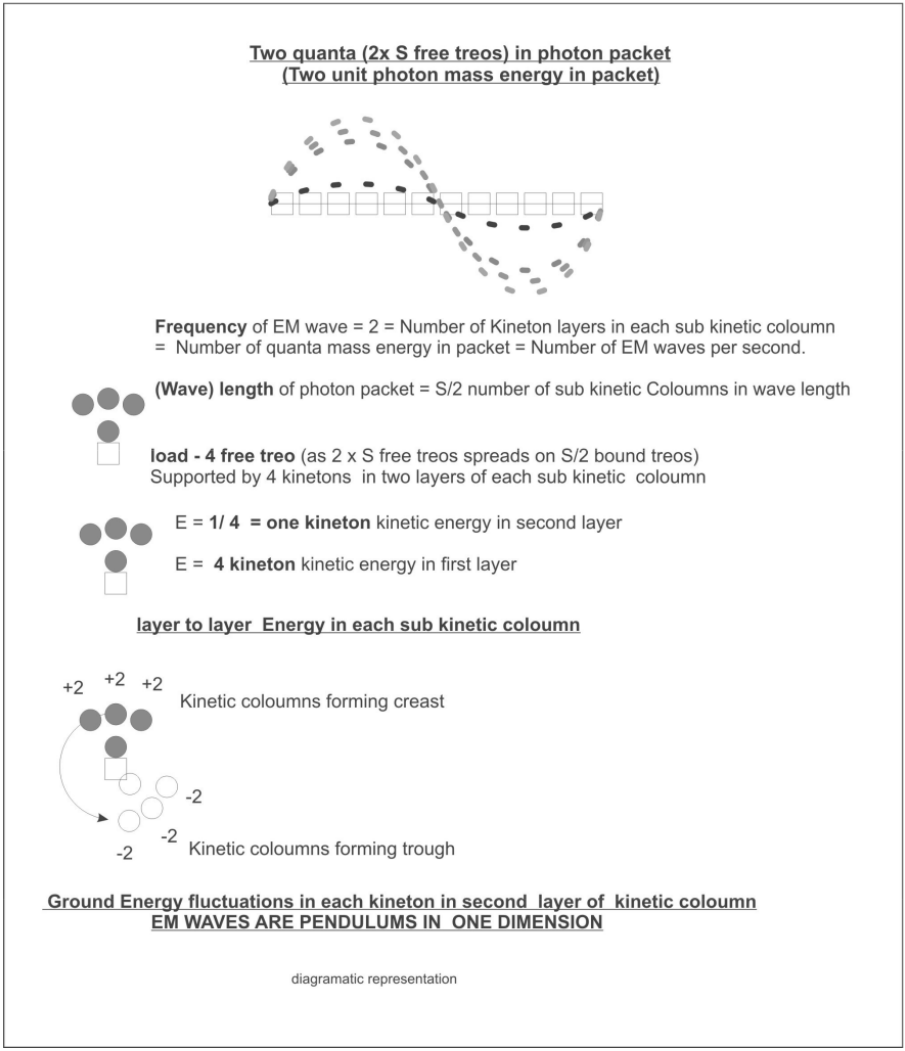
Two quanta (2x S free treos) in photon packet
(Two unit photon mass energy in packet)
Frequency of EM wave = 2 = Number of Kineton layers in each sub kinetic coloumn
= Number of quanta mass energy in packet = Number of EM waves per second.
(Wave) length of photon packet = S/2 number of sub kinetic Coloumns in wave length
load - 4 free treo (as 2 x S free treos spreads on S/2 bound treos)
Supported by 4 kinetons in two layers of each sub kinetic coloumn
E = 1/ 4 = one kineton kinetic energy in second layer
E = 4 kineton kinetic energy in first layer
layer to layer Energy in each sub kinetic coloumn
+2 +2 +2
Kinetic coloumns forming creast
-2
-2
-2
Kinetic coloumns forming trough
Ground Energy fluctuations in each kineton in second layer of kinetic coloumn
EM WAVES ARE PENDULUMS IN ONE DIMENSION
diagramatic representation

Figure 3.4: Second quantum level in deformation of first dimension in length. 1 + 3 Kinetons are in two layered all sub kinetic coloumns, one at each apex bound treo in its S/2 bound treos wavelength.

3.1.3 Third Quantum Level of First Dimensional deformation.

(5 Rows, each of S/3 bound treos are added in Deformation)

Three quanta (3 × S free treos) is mass energy of 'three quanta photon packet', and according to formula S/3 bound treos is wavelength (= S bound treo/3 quanta mass energy in packet)

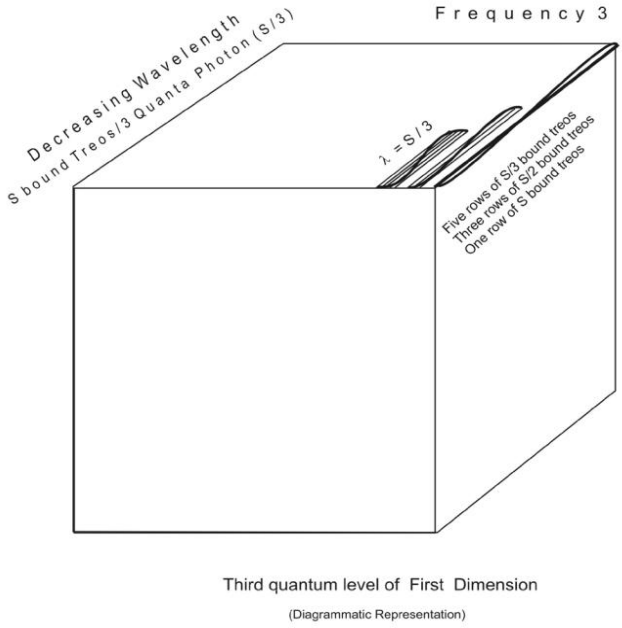
Decreasing Wavelength
S bound Treos/3 Quanta Photon (S/3)
Frequency 3
λ = S/3
Five rows of S/3 bound treos
Three rows of S/2 bound treos
One row of S bound treos
Third quantum level of First Dimension
(Diagrammatic Representation)

Figure 3.5: Third quantum level in deformation of first dimension in length: additional deformation of 5 rows of S/3 bound treos is needed to form all sub kinetic coloumns.

One row of S bound treos and 3 rows of S/2 bound treos are already deformed; Now 5 new rows of S/3 bound treos are added and thus, at each apex bound treo along its S/3 bound treo wavelength, it forms one sub kinetic coloumn of 3^2 kinetons (1 + 3 + 5 = 9 kinetons) in its 3 layers. (Fig. 3.5.)

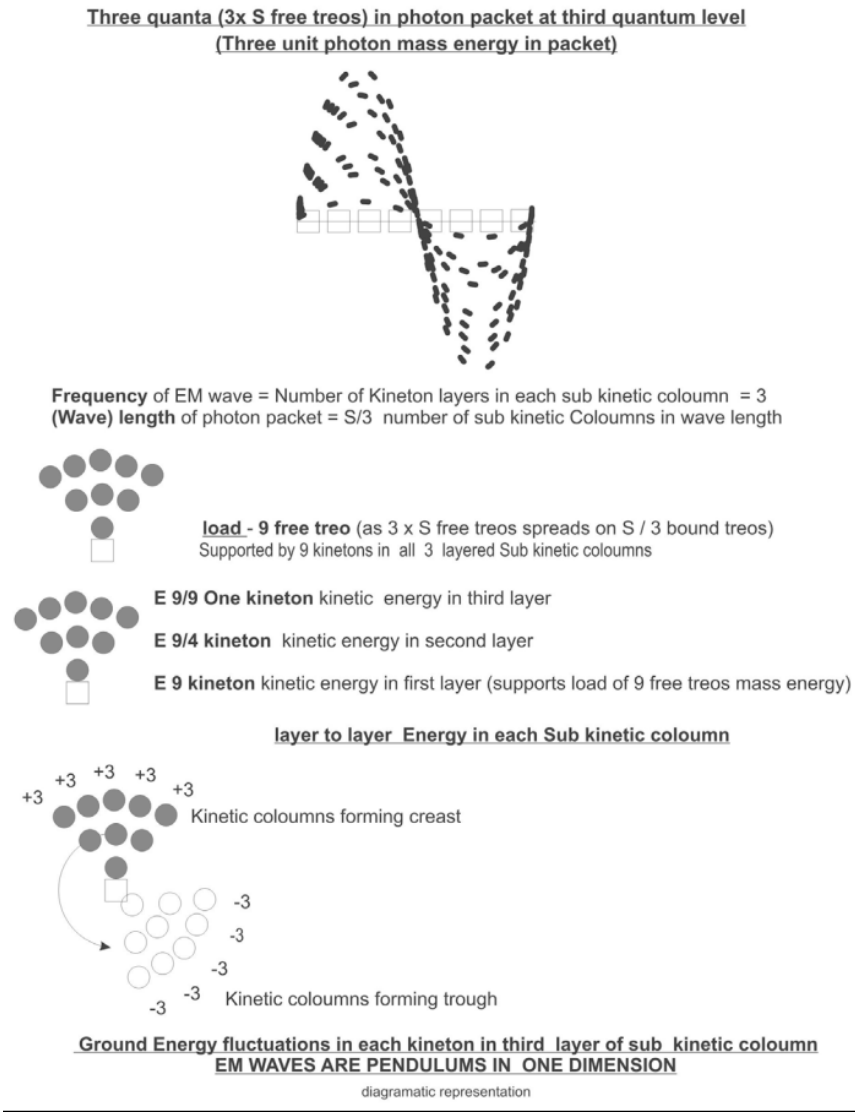
Three quanta (3x S free treos) in photon packet at third quantum level
(Three unit photon mass energy in packet)
Frequency of EM wave = Number of Kineton layers in each sub kinetic coloumn = 3
(Wave) length of photon packet = S/3 number of sub kinetic Coloumns in wave length
load - 9 free treo (as 3 x S free treos spreads on S / 3 bound treos)
Supported by 9 kinetons in all 3 layered Sub kinetic coloumns
E 9/9 One kineton kinetic energy in third layer
E 9/4 kineton kinetic energy in second layer
E 9 kineton kinetic energy in first layer (supports load of 9 free treos mass energy)
layer to layer Energy in each Sub kinetic coloumn
+3 +3 +3 +3 +3
Kinetic coloumns forming creast
-3 -3 -3 -3 -3
Kinetic coloumns forming trough
Ground Energy fluctuations in each kineton in third layer of sub kinetic coloumn
EM WAVES ARE PENDULUMS IN ONE DIMENSION
diagramatic representation

Figure 3.6: Third quantum level in deformation of first dimension in length. 1 + 3 +5 Kinetons are in three layered all sub kinetic coloumns, one at each apex bound treo in its S/3 bound treos wavelength.

Formation of one EM wave at third quantum level is shown in Fig. 3.5. All sub kinetic coloumns are formed by 1 row of S bound treos, 3 rows of S/2 bound treos which are already deformed and now additional 5 rows each of S/3 bound treos length will deform.

Thus, total 3 × S free treos in three quanta photon packet, spread uniformly on S/3 bound treo wavelength and exert a uniform load of 9 free treo at each of these S/3 apex bound treos, which is supported by 9 Kinetons in three layered each sub kinetic coloumn (9 kinetons = 1 + 3 + 5 kinetons in three layers). (Fig.3.6)

While 3 quanta mass energy is in this three quanta photon packet and 3 layers are in each sub kinetic coloumn, 3 is frequency of this wave and with 3-unit angular momentum it will form 3 EM waves in one second.

3.1.4 Fourth Quantum Level of First Dimension.

(Addition of 7 Rows each of S/4 bound treos in Deformation)

Four quanta (or 4 × S free treos) is mass energy of four quanta photon packet. And according to formula S/4 bound treo length is wavelength (= S bound treo/4 quanta mass energy in packet).

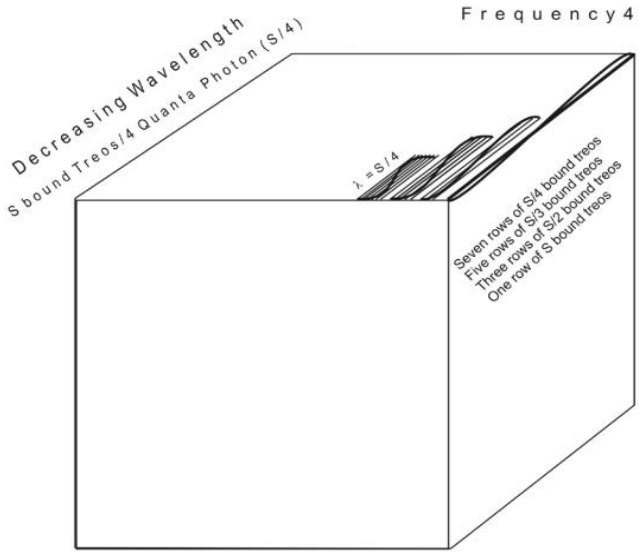
Frequency 4
Decreasing Wavelength
S bound Treos/4 Quanta Photon (S/4)
λ = S/4
Seven rows of S/4 bound treos
Five rows of S/3 bound treos
Three rows of S/2 bound treos
One row of S bound treos
Fourth Quantum Level of first dimension
(Diagrammatic Representation)

Figure 3.7: Fourth quantum level in deformation of first dimension in length: additional deformation of 7 rows of S/4 bound treos length are needed to form all sub-kinetic coloumns.

One row of S bound treos, 3 rows of S/2 bound treos and 5 rows of S/3 bound treos were already deformed/contracted, and now 7 rows each of S/4 bound treo length are added thus, at *each* apex bound treo along S/4 wavelength one sub kinetic coloumn form of 1+3+5+7= 16 kinetons in 4 layers. (Fig. 3.7)

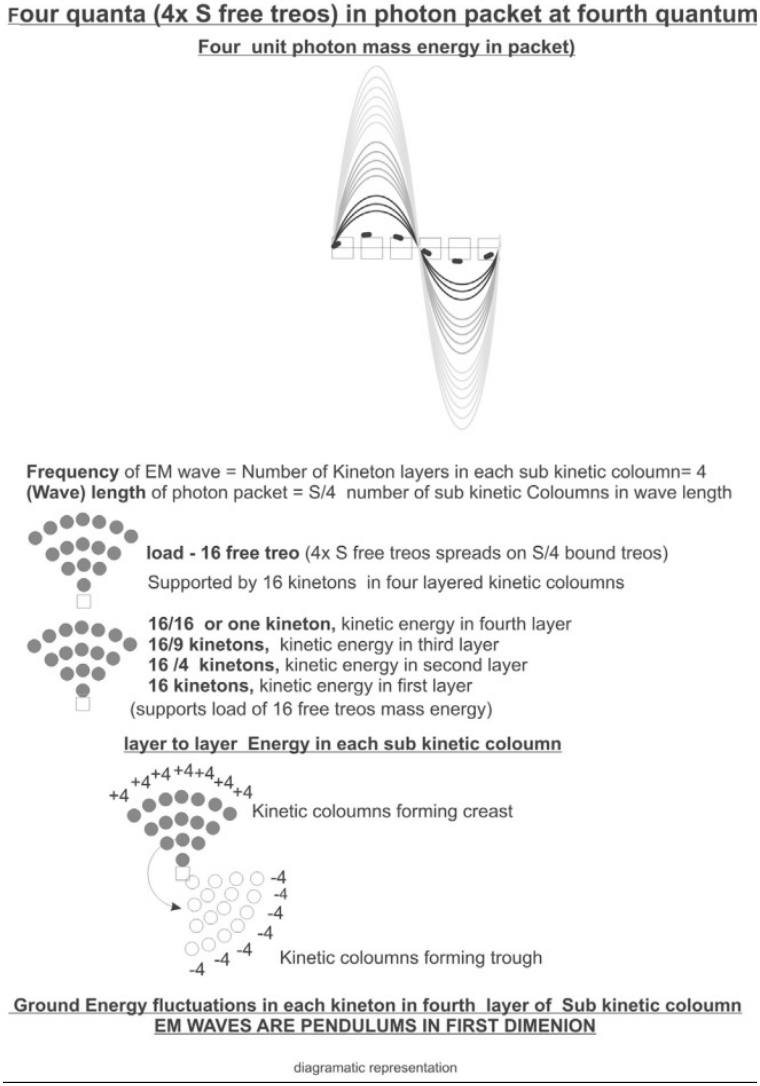
Four quanta (4x S free treos) in photon packet at fourth quantum
Four unit photon mass energy in packet)
Frequency of EM wave = Number of Kineton layers in each sub kinetic coloumn= 4
(Wave) length of photon packet = S/4 number of sub kinetic Coloumns in wave length
load - 16 free treo (4x S free treos spreads on S/4 bound treos)
Supported by 16 kinetons in four layered kinetic coloumns
16/16 or one kineton, kinetic energy in fourth layer
16/9 kinetons, kinetic energy in third layer
16 /4 kinetons, kinetic energy in second layer
16 kinetons, kinetic energy in first layer
(supports load of 16 free treos mass energy)
layer to layer Energy in each sub kinetic coloumn
+4 +4 +4 +4 +4 +4 +4
Kinetic coloumns forming creast
-4 -4 -4 -4 -4 -4 -4
Kinetic coloumns forming trough
Ground Energy fluctuations in each kineton in fourth layer of Sub kinetic coloumn
EM WAVES ARE PENDULUMS IN FIRST DIMENION
diagramatic representation

Figure 3.8: Fourth quantum level in deformation of first dimension in length. 1 + 3 +5 +7 Kinetons are in four layered all kinetic coloumns one at each apex bound treo in its S/4 bound treos wavelength.

Thus, total 4 × S free treos in photon packet, uniformly spread on S/4 bound treo wavelength, exert a uniform load of 16 free treo (or 4^2 treos) at each of these S/4 apex bound treos in wavelength where its 16 free treo load is supported by 16 or 4^2 kinetons in each sub kinetic coloumn (16 kinetons = 1+3+5+7). (Fig. 3.8)

Thus, total 4 × S free treos in photon packet, uniformly spread on S/4 bound treo wavelength, exert a uniform load of 16 free treo at each of these S/4 apex bound treos in wavelength, where its 16 free treo load is supported by 16 kinetons in four layers of each sub kinetic coloumn (16 kinetons = 1+3+5+7) or 4^2 kinetons. (Fig. 3.8)

In EM wave, with one kineton in first layer, 3 kinetons in second, 5 kinetons in third layer and 7 kinetons are in each sub kinetic coloumn, present at each apex bound treo, in S/4 bound treo wavelength; (Fig. 3.8).

While 4 quanta mass energy is in this four quanta photon packet and 4 layers are in its each sub kinetic coloumn, 4 is frequency of this wave and with 4-unit angular momentum, it will form 4 EM waves in one second.

3.1.5 Last or √S Quantum Level of First Dimension.

(Addition of New 2√S-1 Rows of √S bound treos each, at this last quantum level i.e., two small squares of √S bound treos are deformed)

The gamma photon packet at last quantum level is of √S quanta (or √S × S free treos) mass energy. And according to formula √S bound treos is wavelength (= S bound treo/√S quanta mass energy in packet)

If we see total deformation by √S quanta (or √S × S free treos) mass energy in gamma photon, one row of S kinetons, 3 row of S/2 apex bound treos wavelength, 5 rows of S/3 bound treos and 7 rows in S/4 bound treo length and to continue, so on ….. 2n – 1 row of S/n bound treos are already added at each n th quantum level and get deformed. Finally new 2 √S-1 rows each of √S bound treos length (S/√S bound treos wavelength) are added at last √S quantum level. (Figure 3.9 a)

√S × S free treos in gamma photon packet uniformly spreads on √S bound treo wavelength and thus, exert a uniform load of S free treo or one quantum mass energy at each of √S apex bound treos in wavelength. Where this S free treo load is supported by S Kinetons in each sub kinetic coloumn. Each sub kinetic coloumn is of √S layers and made up of S kinetons, in.

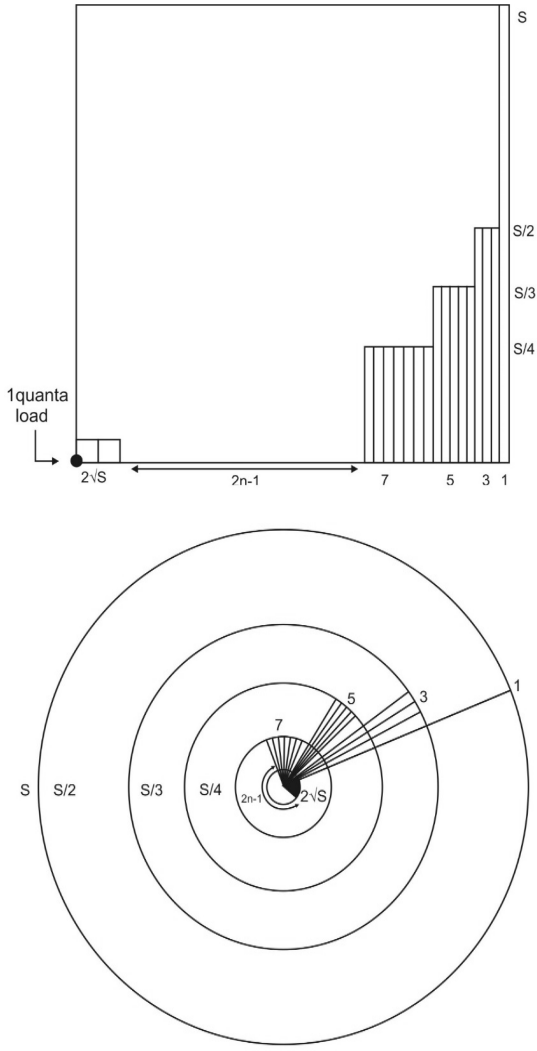

Figure 3.9: At last, √S th quantum level in deformation of first dimension in length: additional deformation of 2√S-1 rows of √S bound treos each is needed to form all sub kinetic coloumns (not to scale)

While √S quanta is mass energy in biggest photon packet and √S layers are in its each sub kinetic coloumn, √S is frequency of this wave and with √S units' angular momentum, √S waves will form in one second.

3.1.6 In One unit time of 1 second, one photon packet (or any packet) is supported.

Number of layers in one sub kinetic coloumn (=Frequency) multiplied by number of sub kinetic coloumns in wavelength = S number of layers form One EM wave which supports this one quanta EM energy by one-by-one S vibrations in all layers.

These S vibrations occur in one second and thus, this one quanta EM energy is supported per second per second or continuously. Up to √S th quantum level, for gamma photon it is the deformation of all S rows of unit space matrix, jointly at all quantum levels in deformation of first dimension in length.

[As per coloumn geometry 2n-1 rows are deformed at each 'n' th quantum level; therefore, in complete deformation of first dimension, from first to √S quantum levels, total S rows (n^2 in 'n' layered kinetic coloumns) will be deformed].

As observed all Photons ranging from 1 to √S quanta mass energy form equal number of 1 to √S EM waves in one second, to support itself for one second.

The deformation of S kinetons in 1 full row of unit space matrix for one quanta photon packet will form one wave in one second at first quantum level. One quanta photon packet takes 1 rotation (and form 1 wave) in one second to be supported for one second.

At second quantum level ('n' =2) three full rows (2n-1) each having S kinetons will be totally used in forming two waves of S/2 bound treo wavelength in one second. Two quanta photon packet will form 2 waves and takes 2 rotations in one second to be supported for one second.

At third quantum level ('n' =3) five full rows (2n-1) each having S kinetons will be fully used to form three waves of S/3 bound treo wavelength in one second. Three quanta photon packet will take 3 rotations (and forms 3 waves) in one second to be supported for one second.

At fourth quantum level ('n' =4) full seven rows (2n-1) each having S kinetons will be completely used in forming four waves of S/4 bound treos wavelength in one second. Four quanta photon packet will take 4 rotations (and forms 4 waves) in one second to be supported for one second.

Thus, gamma photon of √S quanta mass energy is supported in one second, by √S rotations of this photon packet on √S waves. The gamma photon will remain supported on its S/√S wavelength by S/√S vibrations, for S/√S second time only on its one wave. To support it for S vibrations i.e., for full one second, total S vibrations (= S/√S vibrations in one wave × √S waves in one second) for √S waves; it will require full 2√S -1 rows in its total S bound treo length i.e., in full length of unit space matrix, where each row will have S kinetons.

All √S EM waves of gamma photon, (together with all moving deformation at lower quantum levels) will use all S kinetons present in all S rows of first dimension, to support √S quanta mass energy of this gamma photon in UNIT TIME of one second.

After completion of deformation of all rows of unit space matrix in length the second dimension of breadth is also involved in increasing deformation and now length and breadth simultaneously deform to support mass energy of all elementary particles ranging from one unit electron to one unit mass at total √S quantum levels of second dimension.

3.2 Deformation in Two Dimensions of Length and Breadth of one unit space matrix.

Packet of one unit electron has √S quanta mass energy (or √S ×S free treos). At each next quantum level, of second dimensional deformation, this √S quanta mass energy of one 'unit electron packet' increases

(as one unit) up to √S quantum level to produce all energetic electrons, all elementary particles, nucleons, atoms, molecules and body up to one unit mass.

These mass-energy packets of all elementary particles get uniformly spread and exert an equal 'load' on all apex bound treos along its successively reducing RC wavelength (Thus, they gradually contracting).

To neutralize this load at each apex bound treo, one shell (kinetic coloumn) at each apex bound treo will form (as one bound treo thick disc), in one layer (sheet) of unit space matrix.

Thus, the *RC wavelength* (S bound treos/n quanta mass energy in packet), gives S/n bound treo height to this ***vertically placed*** 'n' quanta mass energy packet. (the increasing *angular momentum* at each quantum level in first dimension finally turns the coloumns to 90 degrees in second dimension). The mass energy packets will gradually shrink at each next quantum level with reducing RC wavelength e.g., and at 1^{st}, 2^{nd}, 3^{rd} and 4^{th} quantum level it will shrink with reducing wavelength at √S, ½√S, 1/3√S, ¼√S apex bound treos length respectively.

In deformation of second dimension, the 'coloumn geometry' will remain same (2n-1 units in its any n th layer, while n^2 are in 'n' layered coloumn) but sub kinetic coloumn, layers of sub kinetic coloumn and kineton of first dimension are replaced by ***shell, sub shells and orbitum*** respectively in second dimensional deformation, as they are formed in two–dimensional geometry of second dimension in one plane.

3.2.1 increasing Breadth of particle.

At any 'n' th quantum level, 2n-1 orbitums (each orbitum of S kinetons) in 'n' th sub shells of each shell are added (in place of 2n-1 kinetons in any newly added 'n' th layer in sub kinetic coloumn of first dimension). Thus, in each shell (kinetic coloumns) present at each apex bound treo along its RC wavelength, one new sub shell (kinetic coloumn layer) will add at each next quantum level, with √S bound treos layers in its increasing radius. This sub shell will form with the addition of one new row of 2n-1 small

squares in diagonally increasing deformation (as each square is of √S bound treos on its two sides and have √S bound treos along its diagonal). (See Figure 3.10).

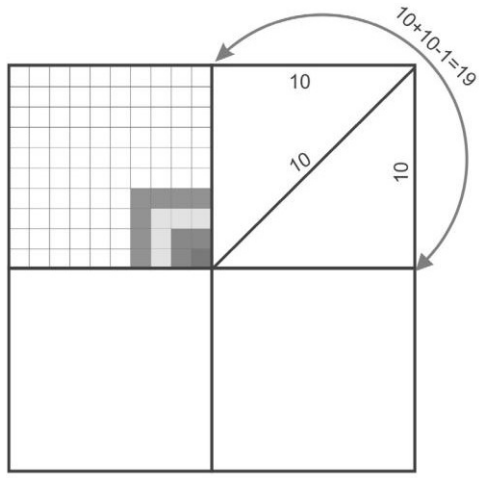

Figure 3.10: For understanding of undeformed space matrix geometry - A small area of undeformed space matrix divides into four big squares, representing all four directions in two-dimensional geometry. Each part will have 100 blocks (small squares) which will be arranged like the above diagram in the space matrix. It has 10 blocks in length, 10 in breadth and 10 in diagonal and on two sides at periphery it has total 19 blocks (= 10 +10 – 1) i.e., 2n-1 in any 'n' th row.

Thus, if total radius of disc of shell, is 'n' number of bound treos layers at any quantum level; then the number of quanta mass energy in this packet is also 'n'; and 'n' is the Frequency of wave.

The unit space matrix can be counted from any point on space matrix where the load is applied. It will start from the point of exerted load as one upper corner of one unit space matrix.

The wavelength reduces from √S bound treos of a unit electron to one bound treo of 'one-unit mass'. With one shell formed in one sheet, the wave involves √S sheets of one unit space matrix, on its RC wavelength at first quantum level for one unit electron mass. Then with gradually reducing number of shells (equal to reducing wavelength at each quantum level) the sheets involved also reduces with decreasing wavelength at each next

quantum level for all elementary particles; up to just one last sheet will be involved at last √S quantum level, at one 'unit gravitational centre' for one 'unit mass'. Thus, in total it *will involve all S sheets*, at √S quantum levels in depth in second dimensional deformation.

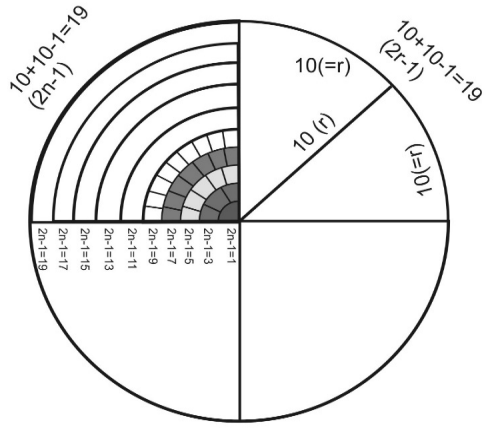

Figure 3.11: For understanding of the geometry of deformed space matrix. This part of one sheet of space matrix shown in Figure 3.10 contracts to form one kinetic coloumn of one shell as shown, and it will have 100 kinetons (which came from 100 small squares) arranged like above diagram. 1+3+5+7+9+11+13+15+17+19 =100 in 10 layered coloumn (10 sub shells will form with 2n-1 orbitums from 2n-1 squares in each row).

3.2.2 Summary of Deformation in Second Dimension of Length and Breadth.

- **Deformation in First quantum Level of Second dimension:** '√S Quanta mass energy' in unit electron packet exerts one quantum load at *each* of √S apex bound treos in its RC wavelength, and is supported by √S shells, which are vertically placed and are formed in √S sheets of unit space matrix. Each rotating shell has one sub shell and one orbitum made up of S kinetons, (all orbitums one over other present in all shells in wavelength will jointly from one **1 *s*** orbit), which comes from S bound treos in one small square deformed (of √S bound treos small square and S bound treos in its area) present in first row. Figure 3.14.

- **Deformation in Second quantum Level of Second dimension**; 2 × '√S quanta mass energy' in 'two-unit electron packet' spreads at √S/2 apex bound treos in its RC wavelength and exert 4 quantum load or 2^2 quanta load, according to its 'electron packet density' (as mass energy doubles on half wavelength).

  These 4 quanta load exerted at each of √S/2 apex bound treos in its RC wavelength is supported by √S/2 number of shells which are vertically placed and are formed in √S/2 sheets of one unit space matrix; along with one new sub shell of 3 orbitums (or 2n-1 orbitums) added.
  Now each rotating shell will have two sub shells; with 1 orbitum in first sub shell and 3 orbitums in second sub shell (while each orbitum is made up of S kinetons), which will jointly form **3 *p*** orbits. First sub shell with one orbitum is at √S bound treo radius, while second sub shell has all its 3 orbitums at 2 × √S bound treo radius.
  One orbitum of first sub shell gets its S kinetons from one square (of √S bound treos square and S bound treos in its area) in first row, while all 3 orbitums of second sub shell gets 3 S kinetons from 3 small squares present in second row deformed. (Figure 3.18).

- **Deformation in Third quantum Level of Second dimension**; 3 × '√S quanta mass energy' in 'three-unit electron packet' exert 9 quantum or 3^2 quanta load, according to its 'electron packet density' (as mass energy triples on one third wavelength).

  These 9 quanta load exerted at each of √S/3 apex bound treos along its RC wavelength is supported by √S/3 shells which are placed vertically and are formed in √S/3 sheets of unit space matrix.
  Now each rotating shell will have three sub shells; with 1 orbitum in first sub shell, 3 orbitums in second sub shell and 5 orbitums in newly added third sub shell will jointly form 1+3+ 5 orbitums. First sub shell with one orbitum is at √S bound treo radius, while

second sub shell has all its 3 orbitums at 2 × √S bound treo radius and third sub shell has all its 5 orbitums at 3 × √S bound treo radius. All orbitums placed one over other in third sub shell of all shells in wavelength will jointly from 5 ***d*** orbit.
One orbitum of first sub shell gets its S kinetons from 1 square in first row, while all 3 orbitums of second sub shell gets 3 S kinetons from 3 squares present in second row deformed and all 5 orbitums of third sub shell gets 5 S kinetons from 5 deformed small squares present in third row (Figure 3.22).

- **Deformation in Fourth quantum Level of Second dimension**; 4 × '√S quanta mass energy' in 'four-unit electron packet' exert 16 quantum or 4^2 quanta load, according to its 'electron packet density'. These 16 quanta load at each of √S/4 apex bound treos in its wavelength is supported by each of √S/4 shells (in RC wavelength) which are placed vertically and are formed in √S/4 sheets of unit space matrix. Now each rotating shell will have four sub shells; with 1 orbitum in first sub shell, 3 orbitums in second sub shell, 5 orbitums in third sub shell and 7 orbitums are in newly added fourth sub shell which will jointly form 7 ***f*** orbits.

With every increase of '√S quanta mass energy' (of one unit electron) at each next quantum level, *one new sub shell of √S bound treo layers* is added. Thus, concentric √S bound treo layers increases at each next 'n' th quantum level with one new sub shell added, while the total radius of shell will become n × √S bound treo layers.

From 1 small square of √S bound treos, present at corner of one sheet of unit space matrix S bound treos from its S bound treo area, generates 1 S kinetons which will form one orbitum. (Figure 3.14)

At second quantum level with the deformation which increases diagonally involves new √S bound treos layers (of one second row) to form second sub shell, and now with increased area 4 S bound treos from 4 S bound treo area (1 square + 3 squares) in each shell get converted in to 4 S kinetons to form 4 orbitums. (Figure 3.18)

At third quantum level with the deformation of new √S bound treos layers diagonally (of third row) it will form third sub shell, and now with 9 S bound treos from increased 9 S bound treo area (1 square + 3 squares + 5 squares) in each shell get converted in to 9 S kinetons to form 9 orbitums. (Figure 3.22)

At Fourth quantum level with the deformation of new √S bound treos layers diagonally (of fourth row) it will form fourth sub shell, and now 16 S kinetons from 16 S bound treo area (1 square + 3 squares + 5 squares + 7 squares) in each shell will get converted in to 16 S kinetons to form 16 orbitums (Figure 3.26).

Thus, the area of each shell increases at each next quantum level which results in addition of kinetic energy (2n-1 quanta kinetic energy from additional 2-1 small squares) i.e., 3S bound treos area from 3 squares in second sub shell, 5S bound treos area from 5 squares in third sub shell and 7S bound treos area from 7 squares in fourth sub shell from which forms additional 3, 5 and 7 supporting orbitums in 2 nd, 3 rd. and 4 th subshells in each shell.

All identical energy orbitums e.g. 1+3+5+7 orbitums present in *s, p, d, f* sub shells of each shell (one below other in all shells) at fourth quantum level will jointly form 16 orbits, at this fourth quantum level. (Figure 3.26)

We can note that at 1^{st}, 2^{nd}, 3^{rd} and 4^{th} quantum level, one quantum, 2^2 = 4 Quanta, 3^2= 9 Quanta, 4^2 = 16 Quanta load is respectively present at each apex bound treo in RC wavelength of packet.

At first quantum level 1 quantum load is supported by 1 orbitum in one first sub shell, at second quantum level, with 3 new orbitums added in one new second sub shell, 1 + 3 = total 4 orbitums supports 4 quanta or 2^2 Quanta load, at third quantum level it adds 5 orbitums in one new third sub shell, 1 + 3 + 5 = total 9 orbitums in three sub shells support 9 quanta load or 3^2 Quanta load and then seven orbitums in fourth new sub shell 1 + 3 + 5 + 7 = total 16 orbitums are in first, second, third and fourth sub shells of each shell (which are placed at each apex bound treo along its wavelength) and supports 16 quanta load or 4^2 Quanta load.

Thus, one orbitum will only support one quantum mass energy by its one rotation in one second.

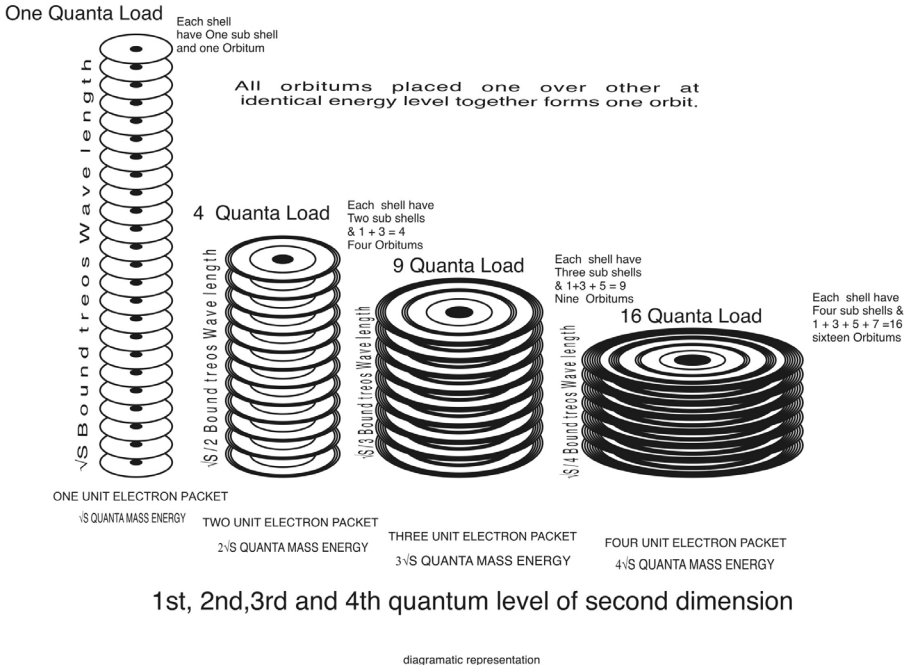
One Quanta Load
Each shell have One sub shell and one Orbitum
All orbitums placed one over other at identical energy level together forms one orbit.
√S Bound treos Wave length
4 Quanta Load
Each shell have Two sub shells & 1 + 3 = 4 Four Orbitums
√S/2 Bound treos Wave length
9 Quanta Load
Each shell have Three sub shells & 1+3 + 5 = 9 Nine Orbitums
√S/3 Bound treos Wave length
16 Quanta Load
Each shell have Four sub shells & 1 + 3 + 5 + 7 =16 sixteen Orbitums
√S/4 Bound treos Wave length
ONE UNIT ELECTRON PACKET
√S QUANTA MASS ENERGY
TWO UNIT ELECTRON PACKET
2√S QUANTA MASS ENERGY
THREE UNIT ELECTRON PACKET
3√S QUANTA MASS ENERGY
FOUR UNIT ELECTRON PACKET
4√S QUANTA MASS ENERGY
1st, 2nd,3rd and 4th quantum level of second dimension
diagramatic representation

Figure 3.12: 1s, 3p, 5d and 7f orbits are formed in four sub shells in each shell per Coloumn geometry at first, second, third and fourth quantum level in deformation of Second dimension.

At subsequent each next 'n' th quantum level the elementary particle packet which condenses, will have 'n'× √S quanta mass energy (Thus, all elementary particle described and not described in standard model, are formed), and n^2 quanta load (with the increasing mass and decreasing RC wavelength) at each apex bound treo, which is supported by addition of 2n–1 orbitums in 'n' th new sub shell, in each shell which are present on each apex bound treo along its S/n bound treos RC wavelength. At any 'n' th quantum level with the deformation of new √S bound treos layers diagonally, it will increase the area of shell by 2n-1 × S bound treos radius, which will add 2n-1 × S kinetons for 2n-1 new orbitums, which are formed in one new 'n' th sub shell.

One unit mass (Planck mass; 2.176×10^{-8} Kg) is maximum load (roughly the weight of one flea egg) which can be supported at one apex bound treo on space matrix anywhere in universe at its 'one-unit gravitational centre' by one graviton with its one graviton coloumn (full kinetic coloumn of second dimension).

The successively decreasing RC wavelength at each quantum level of second dimension will finally reduce to one bound treo (1 bound treo wavelength = S bound treos/S quanta mass energy in one unit mass); for one–unit mass which is supported by one graviton (i.e., at one apex bound treo) with its one graviton coloumn.

In this full graviton coloumn, in one last sheath deformed (with 1 bound treo RC wavelength) at last $\sqrt{S}$ quantum level, it will add one new sub shell with $2\sqrt{S}$ -1 (2n-1) orbitums, in its $\sqrt{S}$ th sub shells (which is formed from last one S th sheet of unit space matrix) and thus, it will have total S orbitums in last shell, which are formed by S^2 kinetons from deformation of last full sheet of unit space matrix, and will support S quanta load of unit mass (of S quanta mass energy or of S^2 free treos).

All previous deformations at all $\sqrt{S}$ quantum levels of second dimension and even all first dimensional deformations will ***persist*** to support the diluting mass pressure of this 'unit mass' exerted on space matrix at a distance, till one 'free treo load is supported by one kineton' by biggest EM wave of unit photon at periphery of this deformation.

This wave formed at one graviton at one-unit gravitational centre is of S frequency so all S orbitums in this last sheet will rotate around graviton, at the speed of light to complete their one rotation in one second. Thus, S quanta load is supported by a graviton. Along with, in deformation at lower quantum levels *total $\sqrt{S}$ number of matter waves* are present, which revolve at gradually reducing speeds, one at each of $\sqrt{S}$ quantum levels with complete deformation of two dimensions.

Theme of Deformation— one free treo is supported by one kineton and thus, each quantum mass energy (S free treos) is supported by one

orbitum made up of S kinetons. Each orbitum rotates once in one second to support its load of one quanta mass energy in *unit time* of one second.

3.2.3 Deformation at First Quantum level in two-dimensional deformation (Quantum world).

(Deformation of √S bound treo layers diagonally and S kinetons in 1 small square)

The unit Electron spreads its √S quanta mass energy (or √S × S free treos packet) on √S apex bound treo in its Reduced Compton wavelength (= S bound treo/√S quantum mass energy in packet). Thus load is one quantum at each of √S apex bound treo, as it evenly distributes its mass energy in vertically placed packet along its √S RC wavelength.

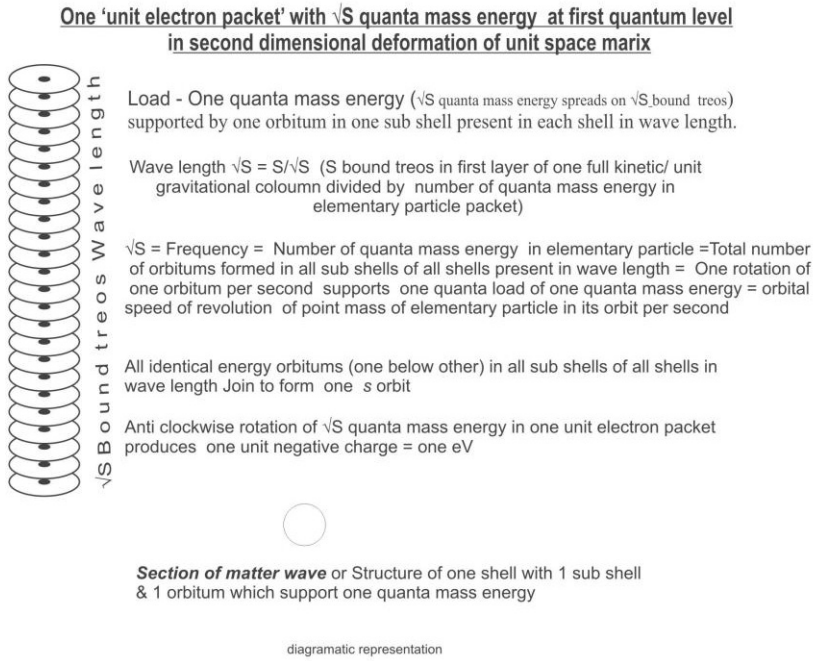
One 'unit electron packet' with √S quanta mass energy at first quantum level in second dimensional deformation of unit space marix
√S Bound treos Wave length
Load - One quanta mass energy (√S quanta mass energy spreads on √S bound treos) supported by one orbitum in one sub shell present in each shell in wave length.
Wave length √S = S/√S (S bound treos in first layer of one full kinetic/ unit gravitational coloumn divided by number of quanta mass energy in elementary particle packet)
√S = Frequency = Number of quanta mass energy in elementary particle =Total number of orbitums formed in all sub shells of all shells present in wave length = One rotation of one orbitum per second supports one quanta load of one quanta mass energy = orbital speed of revolution of point mass of elementary particle in its orbit per second
All identical energy orbitums (one below other) in all sub shells of all shells in wave length Join to form one s orbit
Anti clockwise rotation of √S quanta mass energy in one unit electron packet produces one unit negative charge = one eV
Section of matter wave or Structure of one shell with 1 sub shell & 1 orbitum which support one quanta mass energy
diagramatic representation

Figure 3.13: Coloumn geometry in Second dimension at first quantum level.

One unit electron in its radius deforms √S bound treo layers to form a sub shell in each shell (kinetic coloumn) at first quantum level, and thus, √S is frequency of this wave.

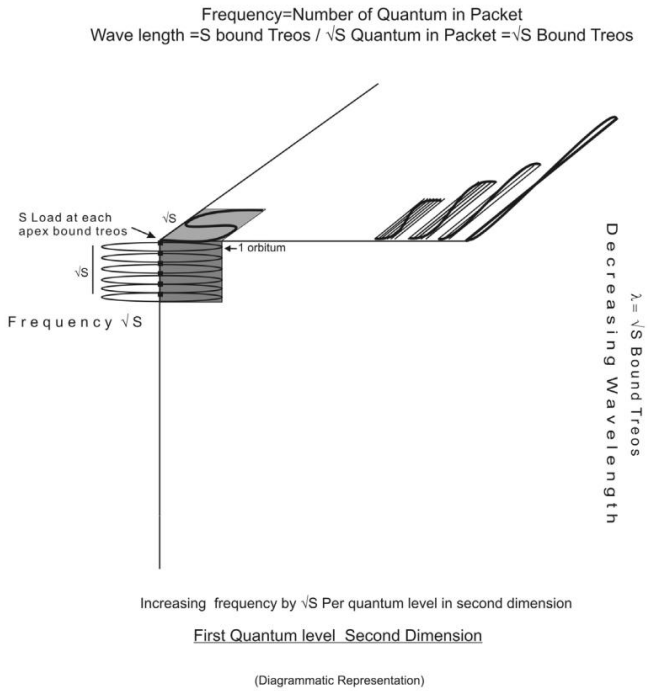
Frequency=Number of Quantum in Packet
Wave length =S bound Treos / √S Quantum in Packet =√S Bound Treos
S Load at each apex bound treos
√S
1 orbitum
√S
Frequency √S
λ = √S Bound Treos
Decreasing Wavelength
Increasing frequency by √S Per quantum level in second dimension
First Quantum level Second Dimension
(Diagrammatic Representation)

Figure 3.14: Coloumn geometry in Second dimension at first quantum level (side view): One orbitum will form from S kinetons, which will come from one small square area of √S bound treos, and to form √S orbitums in wavelength, √S such square areas will deform one over other.

This, S free treos (i.e., one quantum) load is supported by S kinetons in one orbitum which is formed in one sub shell of each shell which are placed at each apex bound treo along RC wavelength of one–unit electron.

One deformed small square has √S bound treos in its one side and also in its diagonal and has area of S bound treos (√S × √S bound treos), which get converted into S kinetons to form one orbitum.

This one square is from one corner of one sheath while √S squares of √S sheets of unit space matrix one below other gets deformed to form √S orbitums.

One orbitum which form in first sub shell of each shell (present at each of √S apex bound treos) in vertical wavelength, rotates once in one second, and all orbitums one below other form one orbit named as ***s*** orbit. (Figure 3.15)

All these squares forming all orbitums are from √S sheets, thus, total deformation is of *one* ***corner cube*** having all its side of √S bound treos (Figure 3.14)

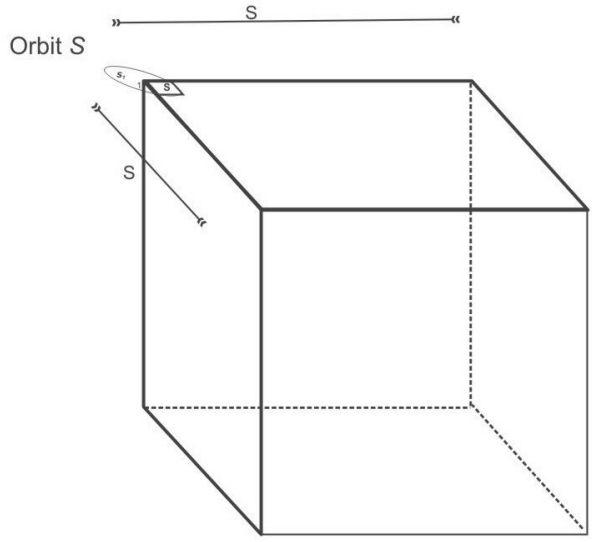

Figure 3.15: Coloumn geometry in Second dimension at first quantum level. Formation of one 's' orbit by union of all √S orbitums along its wavelength.

3.2.4 Second Quantum level of two- dimensional deformation.

(Addition of new √S bound treo layers diagonally, along with 3 new small squares of second row and 3 S kinetons)

The 'two–unit Electron packet' is of 2 × √S quanta mass energy or 2 (√S × S) free treos, and according to formula √S/2 bound treo is its RC wavelength.

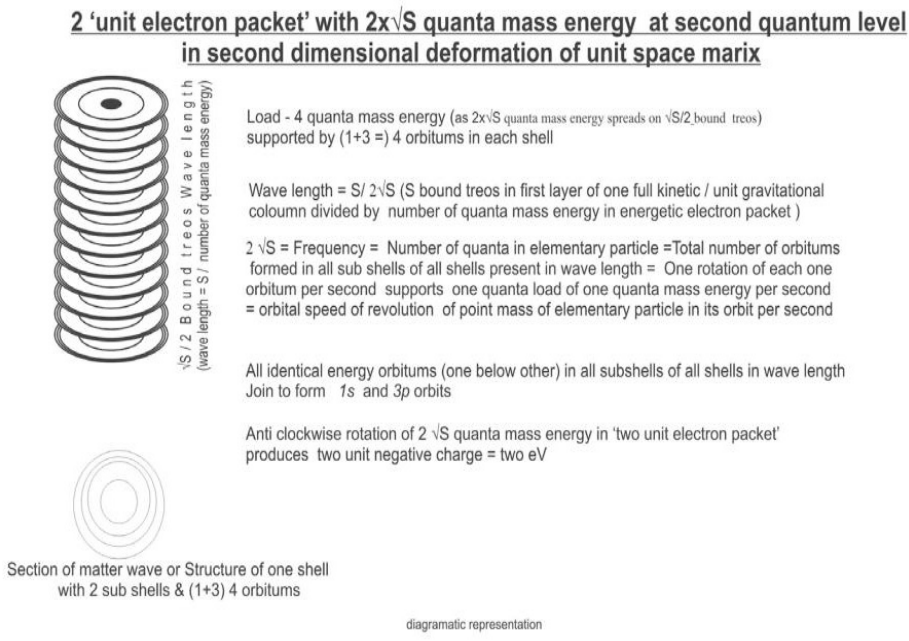
2 'unit electron packet' with 2x√S quanta mass energy at second quantum level in second dimensional deformation of unit space marix
√S / 2 Bound treos Wave length (wave length = S / number of quanta mass energy)
Load - 4 quanta mass energy (as 2x√S quanta mass energy spreads on √S/2 bound treos) supported by (1+3 =) 4 orbitums in each shell
Wave length = S/ 2√S (S bound treos in first layer of one full kinetic / unit gravitational coloumn divided by number of quanta mass energy in energetic electron packet)
2 √S = Frequency = Number of quanta in elementary particle =Total number of orbitums formed in all sub shells of all shells present in wave length = One rotation of each one orbitum per second supports one quanta load of one quanta mass energy per second = orbital speed of revolution of point mass of elementary particle in its orbit per second
All identical energy orbitums (one below other) in all subshells of all shells in wave length Join to form 1s and 3p orbits
Anti clockwise rotation of 2 √S quanta mass energy in 'two unit electron packet' produces two unit negative charge = two eV
Section of matter wave or Structure of one shell with 2 sub shells & (1+3) 4 orbitums
diagramatic representation

Figure 3.16: Coloumn geometry in Second dimension at second quantum level.

Thus, '2-unit electron masses energy packet' exert load of 4 quanta i.e., 2^2 quanta (as double mass energy spread in half wavelength) at each apex bound treo, which is supported by 1+3 orbitums in two sub shells of each shell.

1 square in first row (of √S bound treo layers) forms S kinetons and 3 squares in second row (as √S bound treos layers increases diagonally) adds 3S kinetons from each one sheet, thus, as it form total 1+3 orbitums in two sub shells (from two row) in each shell present at each of √S/2 apex bound treo in wavelength and thus, vertically placed √S/2 more sheets of one unit space matrix are involved just below the deformation of first quantum level.(Figure 3.17 and Figure 3.18)

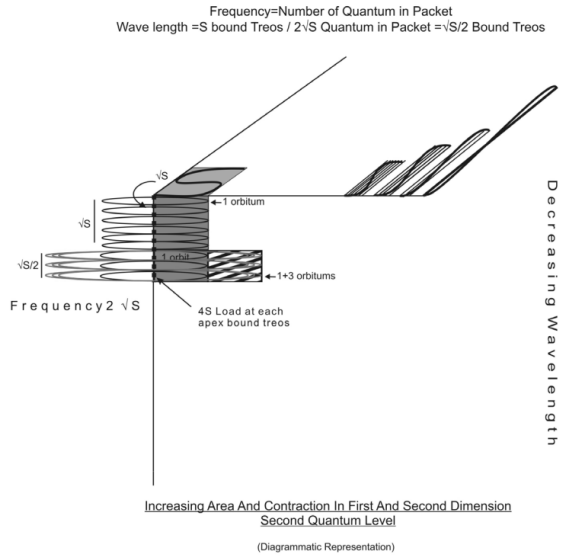

Figure 3.17: Coloumn geometry in Second dimension at second quantum level (side view): One orbitum forms from S kinetons in a small square of √S bound treos and for additional 3 orbitums in second sub shell, 3 such small squares from second row deforms. For all orbitums in all shells in wavelength such 1+3 squares deform from two rows, in all √S/2 sheets which deform below the deformation produced at first quantum level.

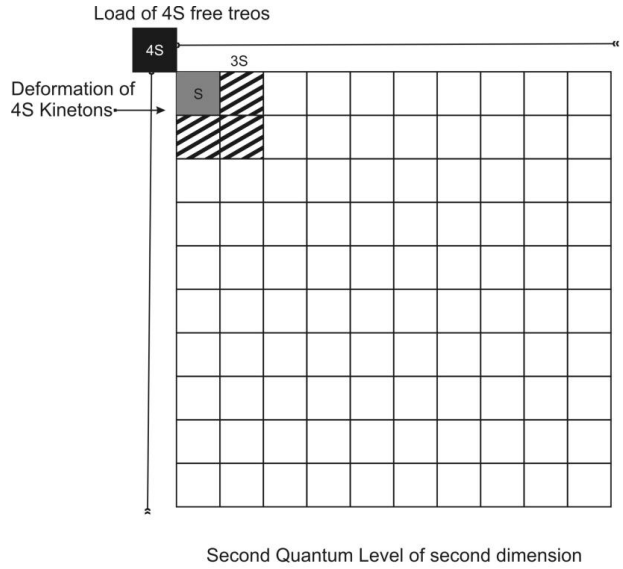

Figure 3.18: Coloumn geometry in Second dimension at second quantum level (Top view). All identical energy orbitums one below other together form 1 s orbit and 3 p orbits.

As, *2 × $\sqrt{S}$ quanta is mass energy* in this two–unit electron packet and *each shell of radius 2 × $\sqrt{S}$ bound treo layers* have 2 sub shells, and 1S + 3 S kinetons from 1 + 3 squares from two rows form 1 + 3 orbitums and thus, *2 × $\sqrt{S}$ is frequency* of this wave.

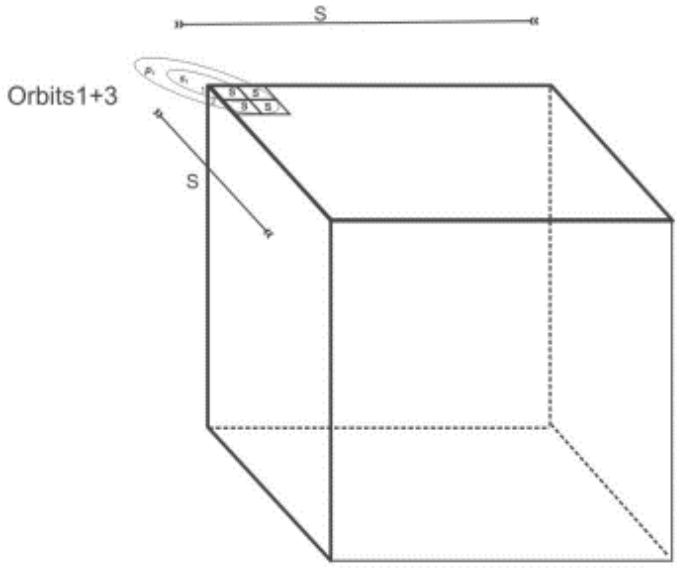

Figure 3.19: Coloumn geometry in Second dimension at second quantum level: 1 orbitum from one square form one sub shell and 3 orbitums from 3 squares form second sub shell in shell. The identical energy orbitums jointly placed, one over other in all shells in wavelength, form 1s and 3p orbits.

3.2.5 Third Quantum level of two- dimensional deformation.

(Addition of new √S bound treo layers diagonally, along with 5 new small squares of third row and 5 S kinetons)

The '3–unit electron packet' is of 3 × √S quanta mass energy or 3 (√S × S free treos), and (according to formula S bound treo/3 × √S quanta mass energy in packet) the √S/3 apex bound treos is its R C wavelength.

This packet spreads on this √S/3 apex bound treos in RC wavelength and exert 9 quanta i.e., 3^2 quanta load on each apex bound treo.

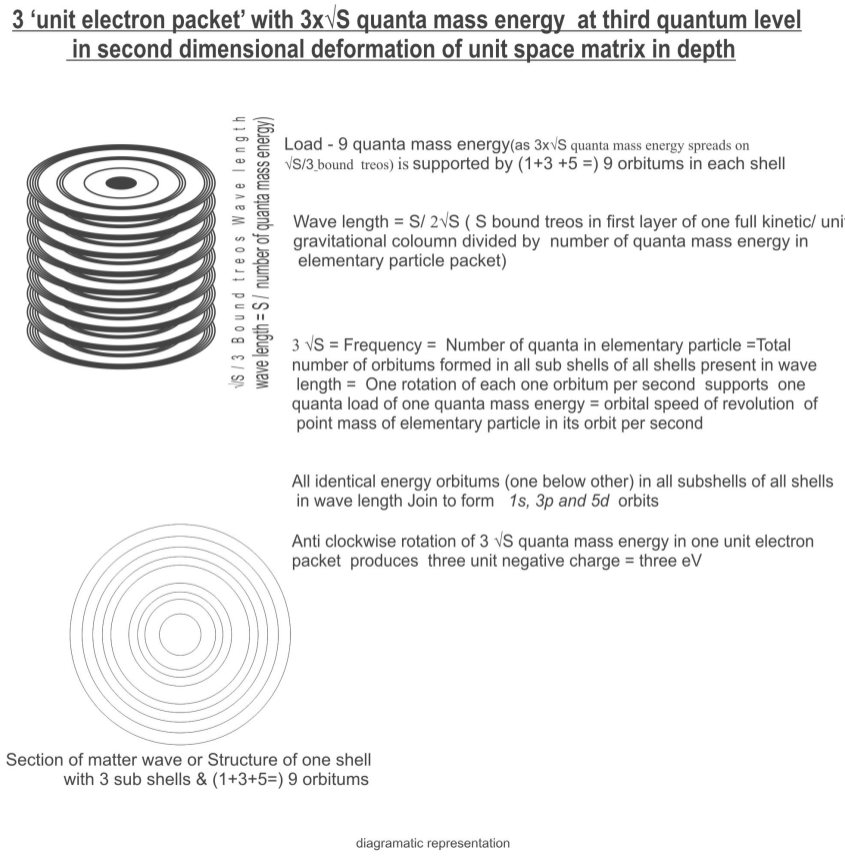
3 'unit electron packet' with 3x√S quanta mass energy at third quantum level
in second dimensional deformation of unit space matrix in depth
√S / 3 Bound treos Wave length
wave length = S / number of quanta mass energy)
Load - 9 quanta mass energy(as 3x√S quanta mass energy spreads on √S/3 bound treos) is supported by (1+3 +5 =) 9 orbitums in each shell
Wave length = S/ 2√S (S bound treos in first layer of one full kinetic/ unit gravitational coloumn divided by number of quanta mass energy in elementary particle packet)
3 √S = Frequency = Number of quanta in elementary particle =Total number of orbitums formed in all sub shells of all shells present in wave length = One rotation of each one orbitum per second supports one quanta load of one quanta mass energy = orbital speed of revolution of point mass of elementary particle in its orbit per second
All identical energy orbitums (one below other) in all subshells of all shells in wave length Join to form 1s, 3p and 5d orbits
Anti clockwise rotation of 3 √S quanta mass energy in one unit electron packet produces three unit negative charge = three eV
Section of matter wave or Structure of one shell
with 3 sub shells & (1+3+5=) 9 orbitums
diagramatic representation

Figure 3.20: Coloumn geometry in Second dimension at third quantum level.

With increasing mass energy and decreasing wavelength '3-unit electron mass energy packet' exert load of 9 quanta at each apex bound treo, which is supported by 1+3+5 orbitums in three sub shells in each shell. All identical energy orbitums one below other in wavelength form *1s, 3p* and *5 d* orbits. While $3 \times \sqrt{S}$ *quanta is mass energy* of this three–unit electron packet and $3 \times \sqrt{S}$ *bound treo layers* are deformed in radius from three rows and thus, $3 \times \sqrt{S}$ *is frequency* of this wave.

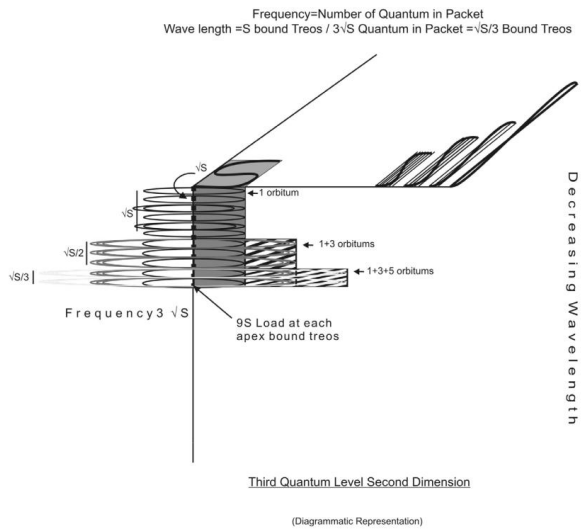

Figure 3.21: Coloumn geometry in Second dimension at third quantum level (side view): 1 orbitum forms from S kinetons in 1 square of first row, 3 orbitums from 3 squares in second row, and 5 orbitums from 5 squares in third row deforms. To form all orbitums in wavelength such 1+3+5 squares deform in three rows, in all √S/3 sheets (which deform one below other beneath second quantum level).

1 + 3 + 5 squares from first, second and third row, which form 1S kinetons + 3 S kinetons + 5 S kinetons = 9 S kinetons are in each shell.

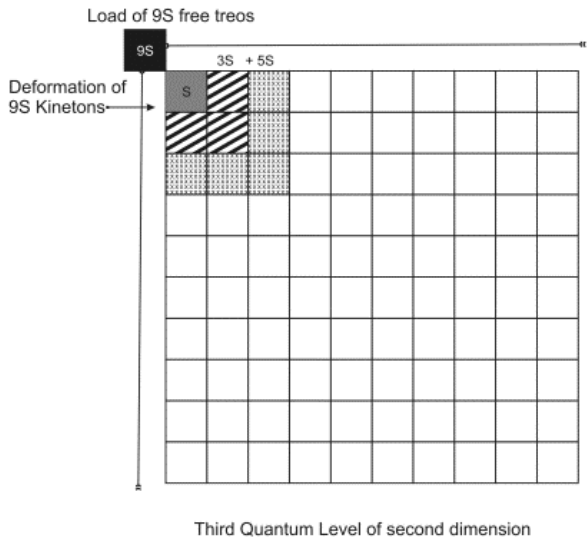

Figure 3.22: 1 + 3 + 5 squares from first, second and third row, which form 1S kinetons + 3 S kinetons + 5 S kinetons = 9 S kinetons in each shell.

1 square in first row (S kinetons), 3 squares in second row (3S kinetons), and 5 squares in third row (5S kinetons) are deformed in each of $\sqrt{S}/3$ sheets of unit space matrix just below the deformation of second quantum level.

Third quantum level which form just below second quantum level of second dimension, each shell has (S + 3S + 5S kinetons) from 1 + 3 + 5 squares in three rows. It provides S kinetons from one square (= $\sqrt{S} \times \sqrt{S}$ kinetons) of first row, 3 S kinetons from three squares of second row and 5 S kinetons from 5 squares of third row to form (1+3+5 orbitums) in three sub shells in each shell present at $\sqrt{S}/3$ apex bound treos in vertical wavelength. Below the deformation at first and second quantum level; it deforms $\sqrt{S}/3$ sheets of unit space matrix which gets involved to form $\sqrt{S}/3$ shells.

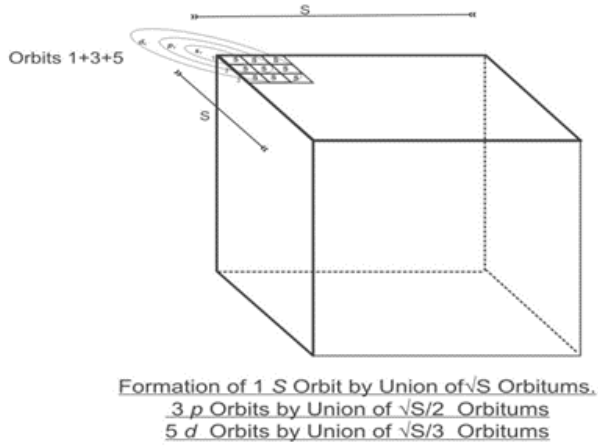
S
Orbits 1+3+5
S
Formation of 1 S Orbit by Union of √S Orbitums.
3 p Orbits by Union of √S/2 Orbitums
5 d Orbits by Union of √S/3 Orbitums

Figure 3.23: Coloumn geometry in Second dimension at third quantum level: 1 orbitum from one square in first row and 3 orbitums from 3 squares in second row, 5 orbitums from 5 squares in third row are formed. These identical energy orbitums jointly placed, one over other in all shells in wavelength, form 1s, 3 p, and 5 d orbits.

It forms 1, 3 and 5 orbitums in three sub shells, in each shell which are present at each apex bound treos in wavelength. All identical energy

orbitums one below other in full RC wavelength together jointly form *1 s* orbit and *3 p* orbits and *5 d* orbits.

3.2.6 Fourth Quantum level of two-dimensional deformation.

(Addition of new √S bound treo Layers diagonally, along with 7 new small squares in third row to form 7 S kinetons)

The 'Four–unit Electron packet' is of 4 × √S quanta mass energy or 4 (√S × S free treos), and (according to formula S bound treo/4 √S quanta mass energy in packet) √S/4 apex bound treo is its vertical R C wavelength. (Figure 3.24 and 3.25)

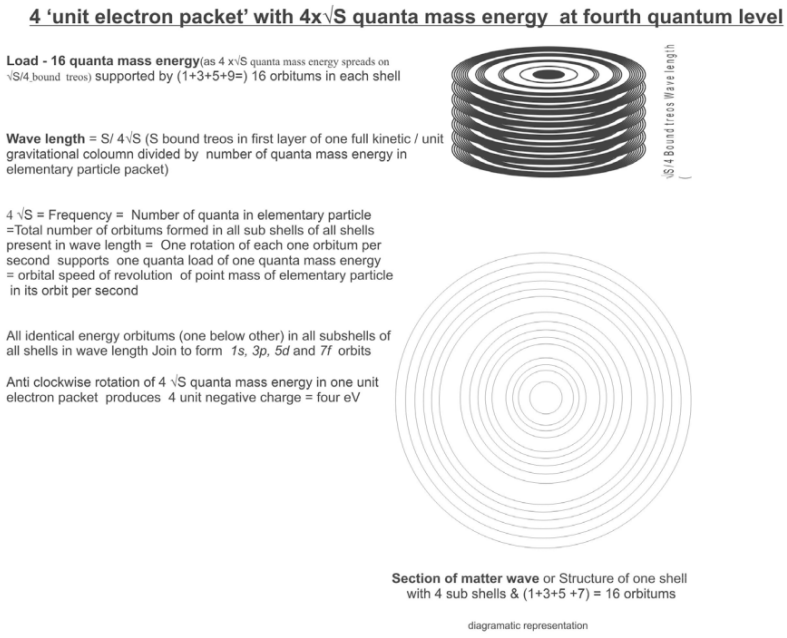
4 'unit electron packet' with 4x√S quanta mass energy at fourth quantum level
Load - 16 quanta mass energy(as 4 x√S quanta mass energy spreads on √S/4 bound treos) supported by (1+3+5+9=) 16 orbitums in each shell
Wave length = S/ 4√S (S bound treos in first layer of one full kinetic / unit gravitational coloumn divided by number of quanta mass energy in elementary particle packet)
√S/4 Bound treos Wave length
4 √S = Frequency = Number of quanta in elementary particle =Total number of orbitums formed in all sub shells of all shells present in wave length = One rotation of each one orbitum per second supports one quanta load of one quanta mass energy = orbital speed of revolution of point mass of elementary particle in its orbit per second
All identical energy orbitums (one below other) in all subshells of all shells in wave length Join to form 1s, 3p, 5d and 7f orbits
Anti clockwise rotation of 4 √S quanta mass energy in one unit electron packet produces 4 unit negative charge = four eV
Section of matter wave or Structure of one shell with 4 sub shells & (1+3+5 +7) = 16 orbitums
diagramatic representation

Figure 3.24: Coloumn geometry in Second dimensional deformation at fourth quantum level.

With increasing mass energy and decreasing wavelength 'Four–unit electron mass energy packet' exerts a load of 16 quanta at each apex bound treo along its √S/4 wavelength. 16 quanta i.e., 4^2 quanta load is supported by each shell present at all apex bound treo in wavelength. Each shell has 4 sub shells in breadth which comes from 4 rows. Each row

is of √S bound treo layers which form one sub shell. They have 1 +3 +5 +7 squares in four rows, which provide 1 S kinetons, + 3 S kinetons, + 5 S kinetons and + 7 S kinetons = 16 S kinetons in each shell to form 1 + 3 + 5 +7 = 16 orbitums. Each orbitum of S kineton supports S free treo (one quantum mass energy) of packet by its one rotation in one second. (Figure 3.27) Thus, $4 \times \sqrt{S}$ *quanta* is mass energy of packet and $4 \times \sqrt{S}$ *bound treo layers* are deformed in four rows thus, $4 \times \sqrt{S}$ *is frequency* of this wave.

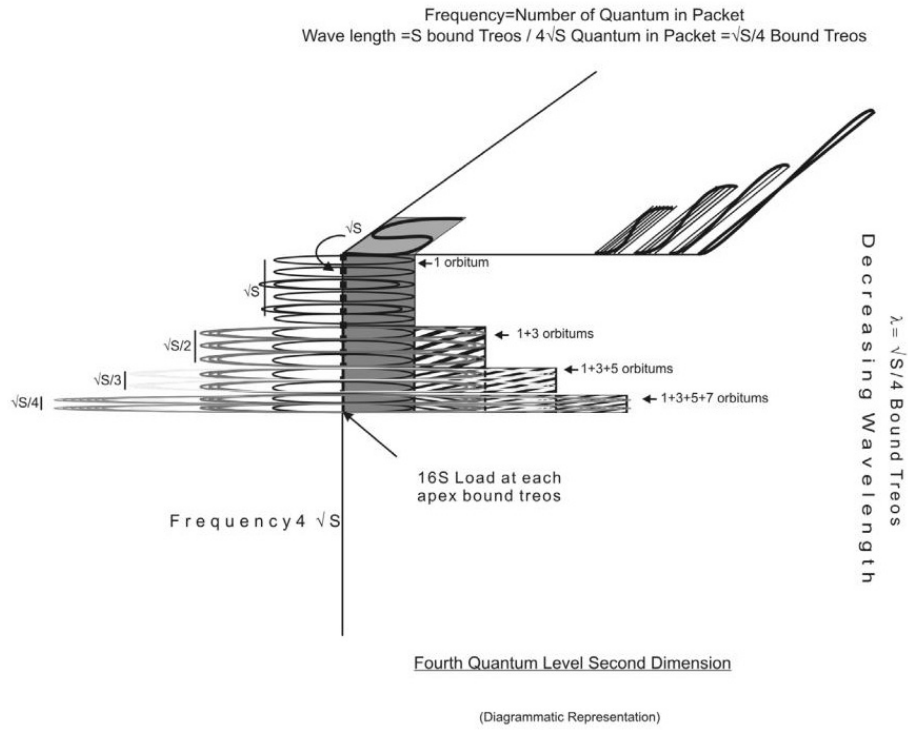

Figure 3.25: Coloumn geometry in Second dimension at fourth quantum level (side view): 1 orbitum forms from S kinetons in 1 square of first row, 3 orbitums from 3 squares in second row, 5 orbitums from 5 squares in third row and 7 orbitums from 7 squares in third row forms. To form all orbitums in each shell, such 1 + 3 + 5 + 7 squares in four rows, are deformed in all √S/4 sheets (which deform below third quantum level).

1 square in first row (S kinetons), 3 squares in second row (3 S kinetons), 5 squares in third row (5 S kinetons) and 7 squares from fourth row (7 S kinetons) are deformed in each of √S/4 sheets of unit space matrix just below the deformation produced at third quantum level.

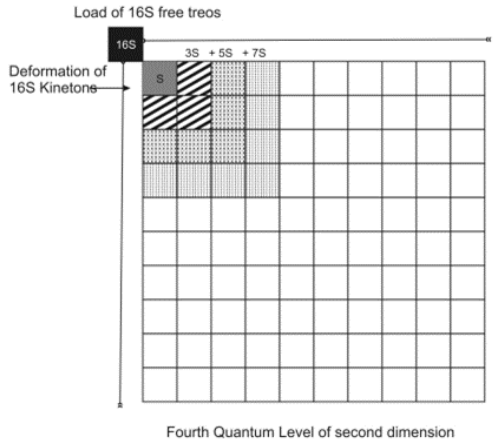

Figure 3.26: Coloumn geometry in Second dimension at fourth quantum level (Top view).

Thus, 1 orbitum made up of S kineton comes from one square in first row, 3 S kinetons and 3 orbitums comes from three squares in second row, 5 S kinetons and 5 orbitums from 5 squares in third row and 7 S kinetons and 7 orbitums from 7 squares in fourth row, are present in 4 sub shells of each shell along $\sqrt{S}/4$ apex bound treos in wavelength. All identical energy (1 + 3 + 5 + 7) orbitums one below other jointly form *1s, 3p, 5d* and *7f* orbits.

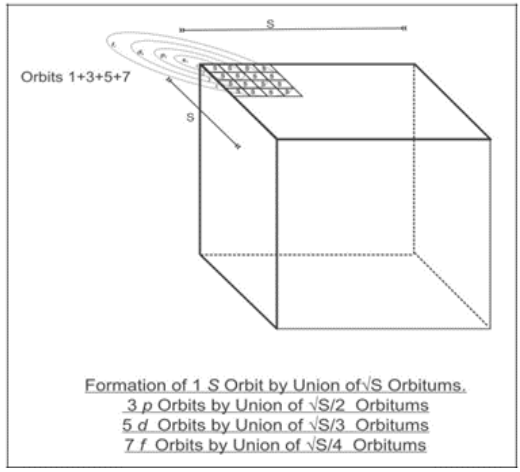
S
Orbits 1+3+5+7
S
Formation of 1 S Orbit by Union of√S Orbitums.
3 p Orbits by Union of √S/2 Orbitums
5 d Orbits by Union of √S/3 Orbitums
7 f Orbits by Union of √S/4 Orbitums

Figure 3.27: Coloumn geometry in Second dimension at fourth quantum level: 1 orbitum from one square in first row, 3 orbitums from 3 squares in second row, 5 orbitums from 5 squares in third row and 7 orbitums from 7 squares in fourth row are formed. These identical energy orbitums placed, one over other in all shells in wavelength, form 1s, 3 p, 5 d, 7 f orbits.

3.2.7 Last Or √S th Quantum Level of two-dimensional deformation.

{deformation of total S bound treo layers (√S ×√S layers deforms up to √S th quantum levels) diagonally along with addition of 2√S - 1 new small squares from last row, which all together deforms S^2 total kinetons from S^2 bound treos present in one full sheet of unit space matrix}

Thus, total √S units of 'unit electron mass energy' accumulates (√S × √S quanta mass energy) or S quanta mass energy (or 2^2 free treos) at last √S th quantum level, which constitutes one unit mass or Planck's mass (2.176×10^{-8} kg).

(According to formula S bound treo/S quanta mass energy in packet) thus, only 1 apex bound treo is RC wavelength of one unit mass of S quanta mass energy.

Now with the addition of √S th rows diagonally (of √S bound treo layers), thus up to √S quantum levels, it is total S bound treo layers (= √S quantum levels × √S bound treo layers which increases at each quantum level) are deformed to form this shell and thus, S is frequency of this wave.

1 square in first row (S kinetons), 3 squares in second row (3 S kinetons), 5 squares in third row (5 S kinetons) and 7 squares from fourth row (7 S kinetons) and so on 2n –1 squares in any 'n' th row ……..and then finally 2√S – 1 squares are added in last √S th row and thus, it involve one full last sheet of unit space matrix (in depth), at this last quantum level.

This last one sheet provides S quanta or S^2 kinetons, from total S number of small squares which are present in all √S rows together.

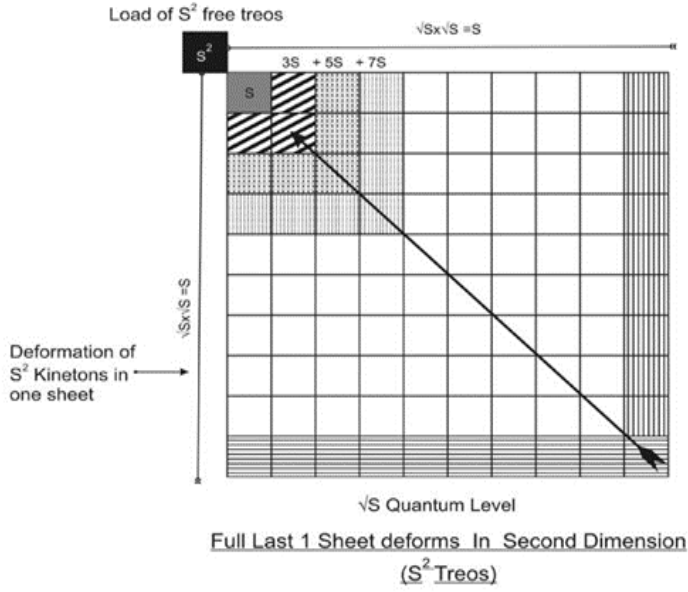

Figure 3.28: Coloumn geometry in Second dimension at last √S quantum level: (Top view): 1 square + 3 squares + 5 squares + 7 squares and so on ... 2n –1 squares in any 'n' th row and then finally 2√S – 1 squares are added in last √S th row; thus, it finally involve one full last sheet of unit space matrix in depth, at last quantum level, with its just one bound treo RC wavelength.

From deformation of last √S th row in last full sheet, total $\sqrt{S} \times \sqrt{S} = S$ squares are deformed, which have total S quanta kinetons (as S orbitum are formed while each orbitum have one quantum kinetic energy) which form one full matter wave in last layer to support one–unit mass of S quanta mass energy or S^2 free treos. Thus, a matter wave which forms at last quantum level is of 1 bound treo RC wavelength i.e., at only one apex bound treo, or at the unit gravitational center (at one graviton) and it supports one–unit mass.

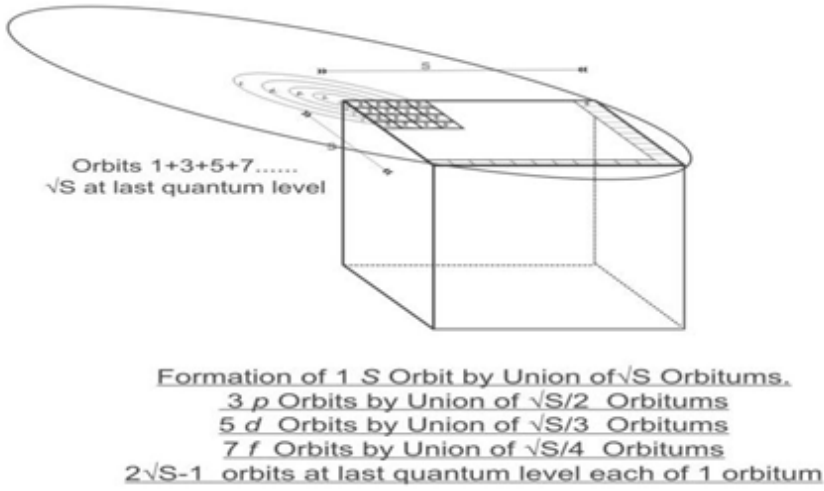
Orbits 1+3+5+7.....
√S at last quantum level
Formation of 1 S Orbit by Union of√S Orbitums.
3 p Orbits by Union of √S/2 Orbitums
5 d Orbits by Union of √S/3 Orbitums
7 f Orbits by Union of √S/4 Orbitums
2√S-1 orbits at last quantum level each of 1 orbitum

Figure 3.29: Coloumn geometry in Second dimension at last √S quantum level: S orbitums in last one sheet and total S orbitums at all quantum levels together in one graviton coloumn, support one–unit mass of S2 free treos.

The last matter wave is formed by one revolving shell, which have √S sub shells (in last sub shell it adds 2√S–1 orbitums) and total S orbitums or S orbits, with total involvement of S bound treo layers in length and S bound treo layers in breadth in last sheet in total full deformation of second dimension.

3.3 Deformation in all Three Dimensions of space in Length, Breadth and Depth of one unit space matrix.

(Fields to support from one unit mass to √S unit masses body)

Unit mass is the maximum 'load' (equal to one flea egg), which is supported at its one–unit gravitational center, at one 'graviton' placed at one bound treo of space matrix. But then how bigger masses of cosmic bodies and galaxies are supported by space matrix?

Theme of Deformation in third dimension—in universe, @ one free treo is supported by one kineton and thus, each unit mass (S^2 free treos) is supported at one 'graviton' by its one 'graviton coloumn' made up of

S^2 kinetons. But from one–unit mass to √S unit masses body, which exerts square number of unit masses load, at its gravitational centre is supported by square number of one to S gravitons in increasing number of spiral layers (from one to √S spiral layers) at 1 to √S quantum levels, in formation of one full 'electron black hole'; which form one cyclonic wave in third dimension.

For the biggest √S unit mass body (i.e., of approx. 10^{13} Kg; or one billion metric ton) can be supported by deformation of all three dimension by one kinetic coloumn of 'electron black hole' of √S spiral concentric layers, which directs its combined kinetic pressure (of all S gravitons present in this kinetic coloumn) towards its apex at gravitational center of body, to support its S unit mass load. (As per coloumn geometry, 2n–1 gravitons are present in any 'n' th spiral layer of this one electron black hole while n^2 gravitons are in 'n' layered kinetic coloumn).

The 'Electron black hole' is one full kinetic coloumn of third dimension, which have √S spiral concentric layers (which get compacted to the size of one electron of 10^{-13} meter around gravitational centre of body) and has total S gravitons formed by deformation of S^3 bound treos (in all pages of one book) in complete three–dimensional contraction of one cube of one–unit space matrix.

The rotating gravitational field of this 'electron black hole' will be formed by uncurling of all graviton coloumns of S gravitons which thus form all '√S gravitational field quantum levels' in gravitational field (while the field extends in any one plane by uncurling of just 2√S –1 gravitons present in outermost layer of this electron black hole.)

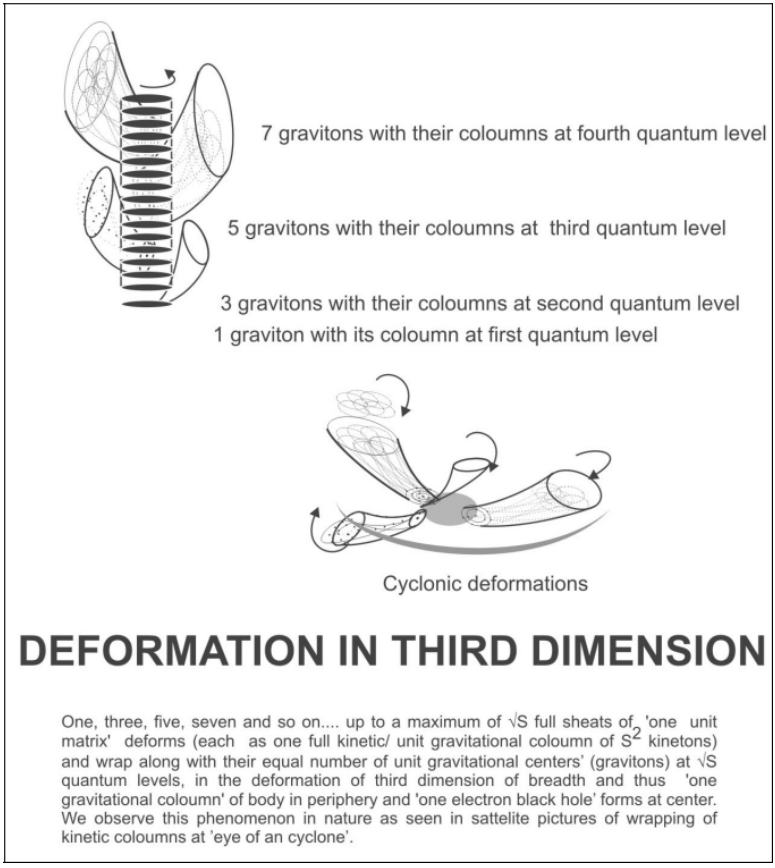
7 gravitons with their coloumns at fourth quantum level
5 gravitons with their coloumns at third quantum level
3 gravitons with their coloumns at second quantum level
1 graviton with its coloumn at first quantum level
Cyclonic deformations
DEFORMATION IN THIRD DIMENSION
One, three, five, seven and so on.... up to a maximum of √S full sheats of 'one unit matrix' deforms (each as one full kinetic/ unit gravitational coloumn of S2 kinetons) and wrap along with their equal number of unit gravitational centers' (gravitons) at √S quantum levels, in the deformation of third dimension of breadth and thus 'one gravitational coloumn' of body in periphery and 'one electron black hole' forms at center. We observe this phenomenon in nature as seen in sattelite pictures of wrapping of kinetic coloumns at 'eye of an cyclone'.

Figure 3.30: Coloumn geometry in deformation of Third dimension.

We can visualize such bigger deformations of three dimension in nature; in satellite picture of 'eye of a cyclone' along with circulating and winding layers of graviton coloumns; which produce havoc in cyclone affected areas by its cyclonic waves.

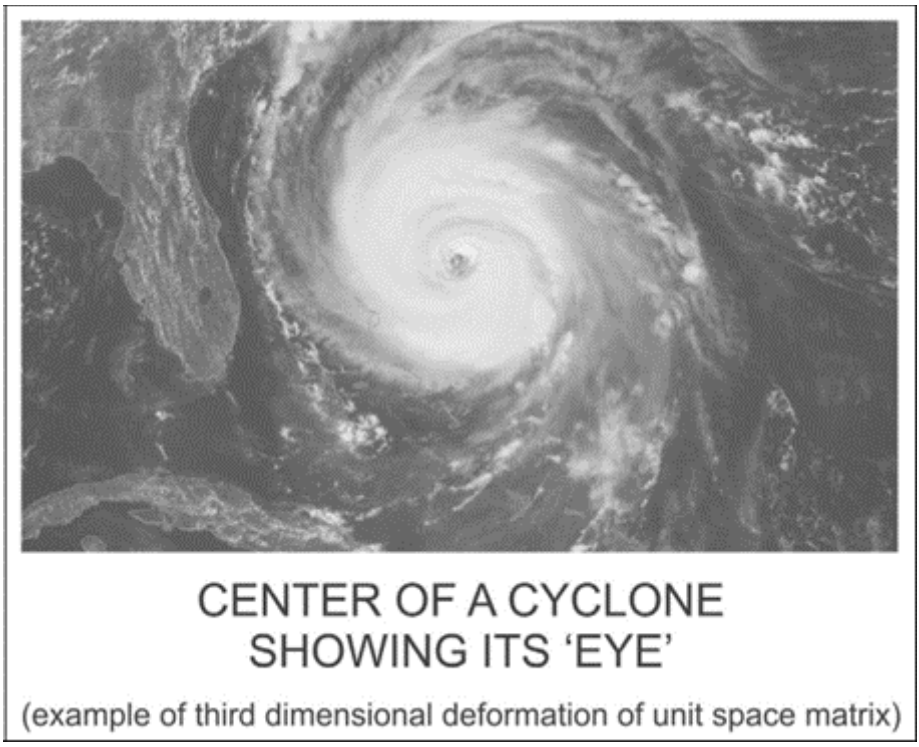

Figure 3.31: Coloumn geometry in three-dimensional deformation is seen in nature; as 'eye of cyclone' (as being shown in satellite picture' of cyclone on TV screen) while cyclonic waves cause havoc in cyclone affected areas.

3.3.1 First Quantum level of three-dimensional deformation.

One deformed last full sheet (last page of our book for understanding) of unit space matrix in second dimension, with its S^2 kinetons wraps at first quantum level of third dimension to support one–unit mass at one graviton in 1^{st} spiral layer of electron black hole.

3.3.2 Second Quantum level of three-dimensional deformation.

Three deformed full sheets are added; Just above first quantum level (one bottom sheet is deformed which provides S^2 kinetons of one graviton coloumn), 3 more full sheets are deformed of 'one unit space matrix' which wraps at second quantum level (1+3 sheets), to support exerted load of 4-unit masses,

load is exerted in 'square of unit masses' i.e., $(2)^2$ unit masses at its gravitational center of this 2 unit masses body, is supported by 4 gravitons = 1 + 3 gravitons, in 1st and 2nd spiral layer, where 1 + 3 full sheets (each forming one full graviton coloumn) of unit space matrix are wrapped, while making an two layered kinetic coloumn of electron black hole.

3.3.3 Third Quantum level of three-dimensional deformation.

Five deformed full sheets are added; (above 1+ 3 sheets already deformed) of unit space matrix just above second quantum level, and now total (1+3+5 sheets) wraps as 1+3+5 gravitons, at third quantum level to support three–unit masses in a body.

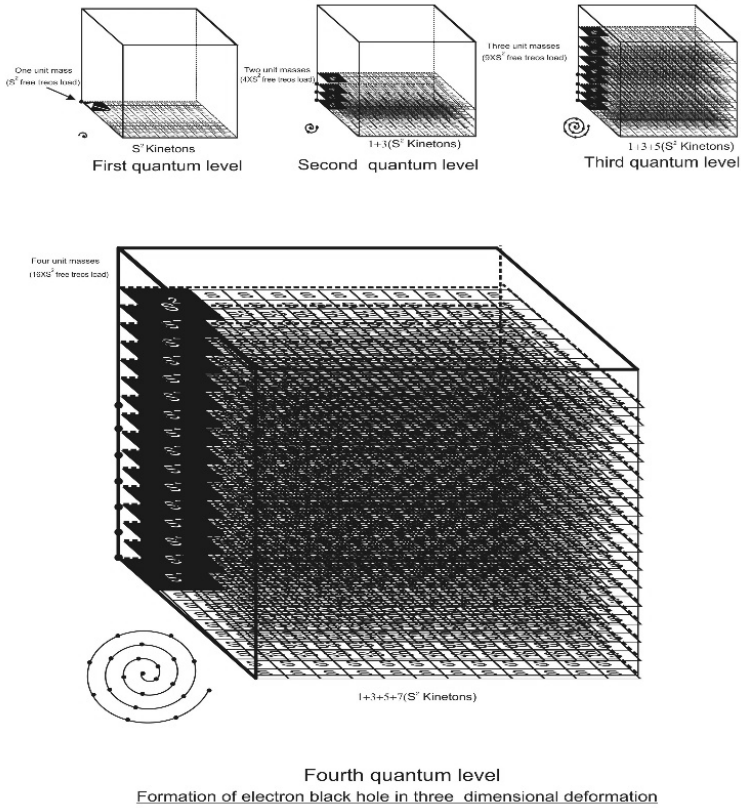

Figure 3.32: Coloumn geometry in Third dimension at 1st, 2nd, 3rd and 4th quantum level.

It supports total load of $(3)^2$ unit masses load, of 3 unit masses body, by 9 gravitons = 1 + 3 + 5 gravitons, in 1^{st}, 2^{nd} and 3^{rd} spiral layer of one three layered kinetic coloumn of 'electron black hole'.

3.3.4 Fourth Quantum level of three-dimensional deformation.

Seven deformed full sheets are added; Now at fourth quantum level 7 gravitons and 7 graviton coloumns, which are formed from 7 full sheets (7 pages) of one 'unit space matrix' will be added in fourth spiral layer in deformation at fourth quantum level of third dimension (1+3+5 +7 sheets), to support four–unit masses in a body with its total load of 16 unit masses, is supported by 16 gravitons = 1 + 3 + 5 +7 gravitons in 1^{st}, 2^{nd}, 3^{rd} and 4^{th} spiral layer of electron black hole.

Similarly, with the addition of one-unit mass at any 'n' th quantum level, 2n–1 new graviton with 2n–1 graviton coloumns from 2n–1 sheet wraps to form any 'n' th spiral layer of this 'electron black hole'.

3.3.5 Last $\sqrt{S}$ Quantum level of three-dimensional deformation.

In last spiral layer $2\sqrt{S}$–1 sheet are added, and $2\sqrt{S}$–1 gravitons and $2\sqrt{S}$–1 graviton coloumns from $2\sqrt{S}$–1 (pages or) sheet adds in last $\sqrt{S}$ th spiral layer of one completed electron black hole at $\sqrt{S}$ quantum level of third dimension.

When $2\sqrt{S}$ –1 graviton is added in last spiral layer, then this $\sqrt{S}$ layered kinetic coloumn, supports total $\sqrt{S}$ unit masses in a body with its load in square of unit masses i.e., of $(\sqrt{S})^2$ or S unit masses by total S gravitons present at all quantum levels of this electron black hole. Thus, $\sqrt{S}$ unit masses body (or approximately 10^{13} Kg mass in a body i.e., one billion metric ton) is supported by S gravitons in its $\sqrt{S}$ spiral layers in one $\sqrt{S}$ layered 'electron black hole' formed by deformation of all three dimensions of space of one full 'unit space matrix'.

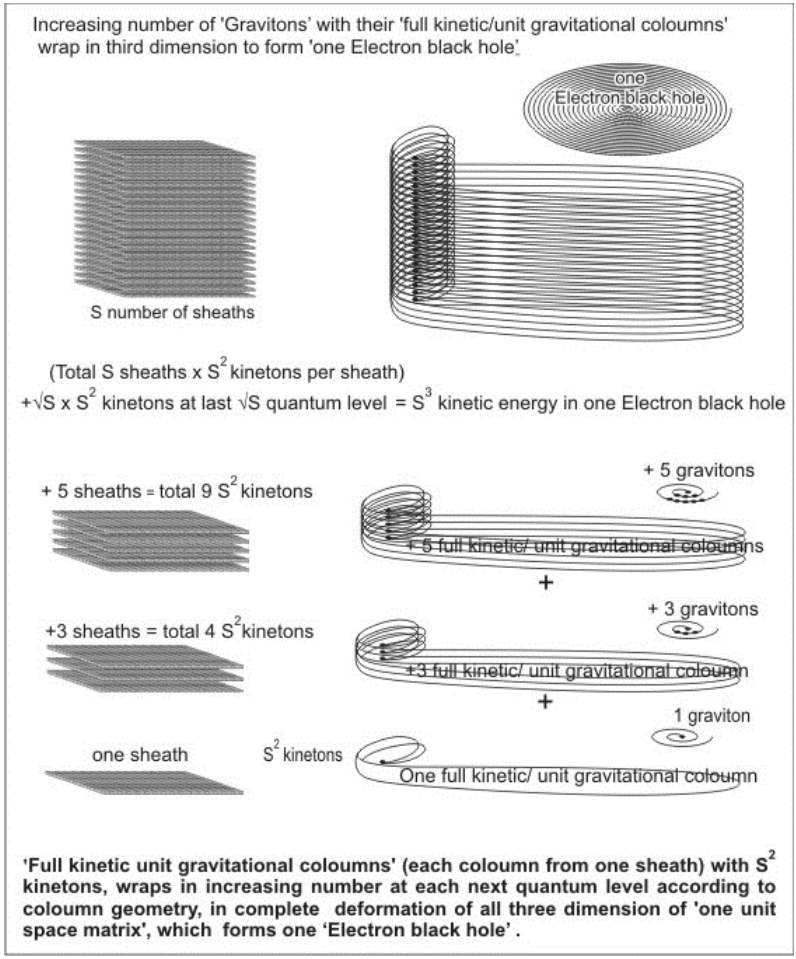
Increasing number of 'Gravitons' with their 'full kinetic/unit gravitational coloumns' wrap in third dimension to form 'one Electron black hole'.
one Electron black hole
S number of sheaths
(Total S sheaths x S² kinetons per sheath)
+√S x S² kinetons at last √S quantum level = S³ kinetic energy in one Electron black hole
+ 5 sheaths = total 9 S² kinetons
+ 5 gravitons
+ 5 full kinetic/ unit gravitational coloumns
+
+3 sheaths = total 4 S² kinetons
+ 3 gravitons
+3 full kinetic/ unit gravitational coloumn
+
1 graviton
one sheath
S² kinetons
One full kinetic/ unit gravitational coloumn
'Full kinetic unit gravitational coloumns' (each coloumn from one sheath) with S² kinetons, wraps in increasing number at each next quantum level according to coloumn geometry, in complete deformation of all three dimension of 'one unit space matrix', which forms one 'Electron black hole'.

Figure 3.33: Coloumn geometry in Third dimension at last quantum level.

3.4 Deformation in all Dimensions of space and fourth dimension of time.

(To support bodies from of one billion metric tons to all big cosmic bodies, and finally up to one-unit black hole).

After the deformation of one unit space matrix in all three dimensions (length, breadth and depth) of space, (which form one 'electron black hole'), *when multiple unit space matrixes are involved the fourth dimension of time also starts distorting/contracting*.

In the formation of one 'gravitational sphere' i.e., kinetic coloumn of fourth dimension, with increasing deformation, it will involve from 1 unit space matrix (required to form 'one electron black hole') to S number of unit space matrixes [as S number of electron black holes will form in one full gravitational sphere of 'one unit black hole'], along with deformation/contraction of fourth dimension of Time at √S quantum levels of fourth dimension. Thus, form biggest full "gravitational sphere of S bound treo layers" will support S^2 unit masses load of S unit masses body of one 'unit black hole'.

3.4.1 Slow Down of Time and formation of Gravitational spheres of cosmic bodies.

If one component of space of 'Space- Time- Energy' (space matrix) contracts, its other two inter dependent components change its value; the time slows down and potential energy is converted into kinetic energy in this contracted local space.

Time slows down @ by 'reduction of one vibration at each next quantum level of gravitational sphere' towards gravitational centre of cosmic body; and the same time deformation is reflected at its 'Gravitational field' of this cosmic body.

Thus, 'With increasing gravitational kinetic energy'[4] along with increasing contraction of space towards gravitational centre of parent body in a gravitational field, the 'Time slows down' in each bound treo layer of gravitational field and vice versa.

(But time not only deforms by *contraction of space* as described above but the Time also slow down with ***increased kinetic energy***, with increased layers in its all kinetic coloumns of any fast-moving body)

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4 [1] e.g., in GPS system, as all GPS satellites are moving at 9000 Km per hour, the time slow down (A) by 8 micro seconds per day (according to theory of relativity), (B) but the satellite clock away from Earth moves by 45 micro seconds per day faster (due to difference in gravitational kinetic energy at two places) and so the net difference of 38 micro seconds per day is taken in account in all calculations.

UNIT SPACE, UNIT TIME, UNIT ENERGY is determined and quantized by Cosmic code i.e., S number. *One Unit space matrix* (which after its full contraction forms a three-dimensional full deformation) is ONE UNIT SPACE. S number of vibrations which occur in one second is UNIT TIME and S number of Treos is one quantum energy i.e., UNIT ENERGY.

Thus, it deforms total S bound treo layers each having 2n –1 graviton in its each n th layer, while total S^2 gravitons (in S number of 'electron black holes') are present in this biggest possible 'gravitational sphere' (kinetic coloumn of fourth dimension) of S layers of one 'unit black hole'. This S layered gravitational sphere of 'one-unit black hole', having total S^2 gravitons (and wrapped S^2 graviton coloumns) is formed by ***contraction of S number of unit space matrices*** or S number of full books.

In fourth dimension √S unit masses, *as one unit*, are added, one by one at each of √S quantum levels, with the *deformation of additional* $\sqrt{S}$ *bound treo layers* in gravitational sphere, at each next quantum level (It is repetition of pattern, which was seen in second dimensional deformation), and incorporates 2n–1 'electron black holes' (each itself of √S bound treo layers) at each 'n' th quantum level (e.g., 1+3+5+7 electron black holes are added at first second, third and fourth quantum level). Thus, the total S number of 'electron black holes' (or S^2 gravitons) are in biggest gravitational sphere of S bound treo layers which supports S unit masses of 'one–unit black hole'; Figure 3.34.

One–unit black hole, made up of S unit masses, at its gravitational center exert S^2 unit masses load (of S^4 free treos = S^2 unit masses × S^2 free treos in each unit mass) which is supported at its gravitational center by S^4 kinetons (as S^2 kinetons are in one graviton coloumn present on each graviton × S^2 gravitons) which comes from total S number of 'electron black holes' which are present in this gravitational sphere of S bound treo layer.

At each of √S quantum levels, additional √S bound treo layers together deforms, and with this increasing radius of gravitational sphere it adds

one, three, five and seven electron black holes, in *one kinetic coloumn layer* at first, second, third and fourth quantum level and so on .....2n–1 'electron black hole' are added at any 'n' th quantum level with one new kinetic coloumn layer added in gravitational sphere.

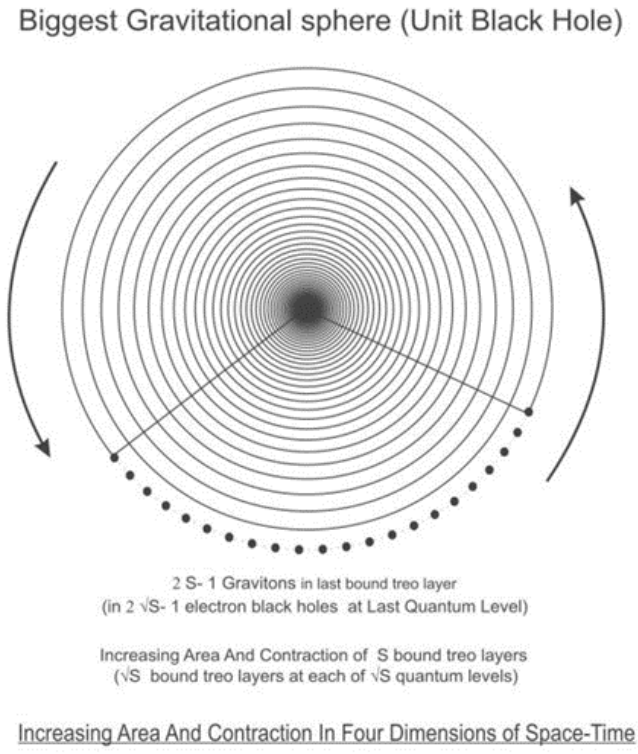
Biggest Gravitational sphere (Unit Black Hole)
2 S- 1 Gravitons in last bound treo layer
(in 2 √S- 1 electron black holes at Last Quantum Level)
Increasing Area And Contraction of S bound treo layers
(√S bound treo layers at each of √S quantum levels)
Increasing Area And Contraction In Four Dimensions of Space-Time

Figure 3.34: Coloumn geometry of deformation produced by one 'unit black hole' in all four dimensions of space-time, produces a 'full gravitational sphere of S layers', in fourth dimensional deformation up to its last quantum level.

In last, at √S th quantum level 2√S–1 'electron black holes' (or 2S–1 graviton along with its graviton coloumns) are added, in formation of this biggest S layered gravitational sphere of one–unit black hole. Thus, one S unit masses body is supported by S^2 gravitons (in S electron black holes) present in S layered gravitational sphere of one– unit black hole.

In deformation of fourth dimension of Time, in biggest gravitational sphere of unit black hole; from **S vibrations per second (of all kinetons)**

at its peripheral layer the number of vibrations is curtailed @ one vibration per quantum level towards its center.

A smaller size cosmic body, like our **Sun**, made up of 10^{38} unit mass, will exert a load of $(10^{38})^{2}$ unit masses at its gravitational center. To support this load at the gravitational center of Sun, a 10^{38} bound treo layered gravitational sphere is formed (it is the same size as calculated by general theory by Einstein), which have $(10^{38})^2$ gravitons (@ 2n–1 graviton in each 'n' th bound treo layer and n^2 gravitons are in full gravitational sphere) as per coloumn geometry. (Figure 3.35)

All curled up rotating graviton coloumn of each graviton in all layers of gravitational sphere when uncurls forms gravitational field of body, which includes $2\times10^{38}-1$ graviton coloumns at outermost peripheral layer placed side by side which together extends spherical gravitational field of Sun outside gravitational sphere in *one plane* by uncurling itself.

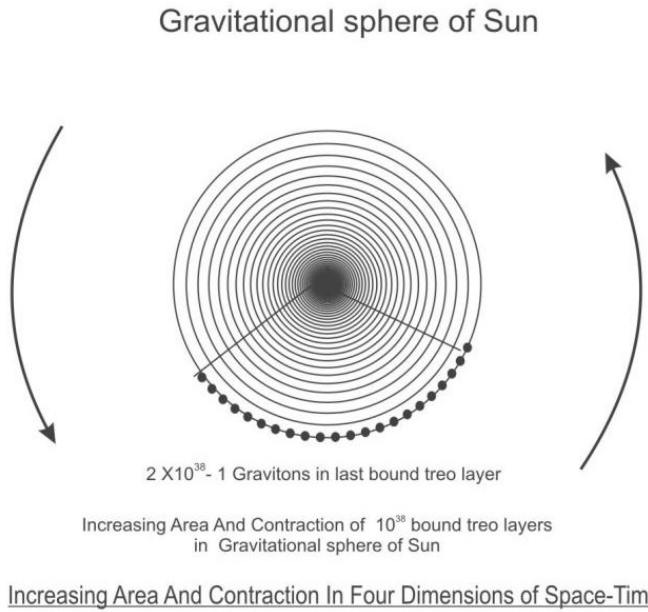
Gravitational sphere of Sun
2 X10^38 - 1 Gravitons in last bound treo layer
Increasing Area And Contraction of 10^38 bound treo layers
in Gravitational sphere of Sun
Increasing Area And Contraction In Four Dimensions of Space-Time

Figure 3.35: 10^{38} unit mass in body of Sun at its gravitational center is supported by 10^{38} bound treo layered gravitational sphere (of 3 Km diameter) which have $(10^{38})^2$ gravitons.

Similarly, **Earth** is made up of 10^{32} unit masses and has 10^{32} layered (Pin head sized) gravitational sphere. Figure 3.36.

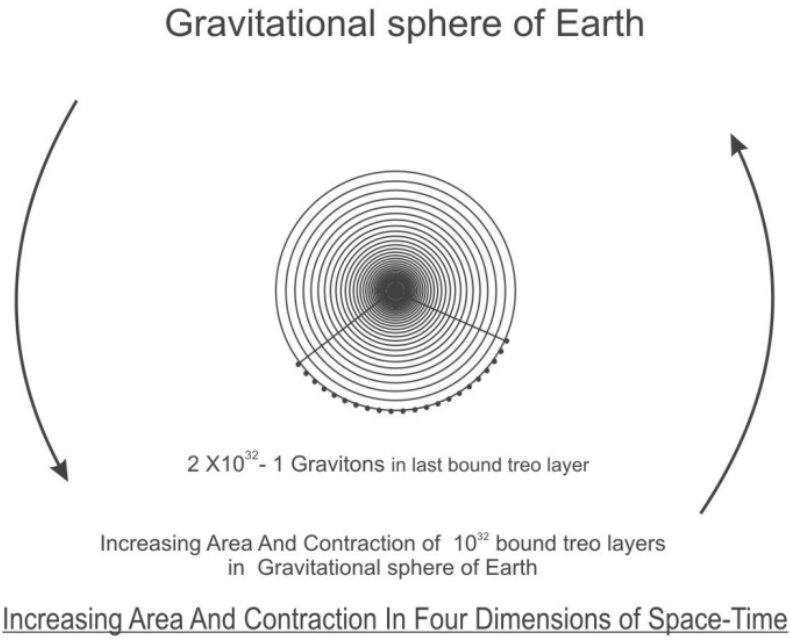
Gravitational sphere of Earth
2 X10^32- 1 Gravitons in last bound treo layer
Increasing Area And Contraction of 10^32 bound treo layers
in Gravitational sphere of Earth
Increasing Area And Contraction In Four Dimensions of Space-Time

Figure 3.36: 10^{32} unit mass in body of Earth at its gravitational center is supported by 10^{32} bound treo layered gravitational sphere (of pin head size) which have $(10^{32})^2$ gravitons.

3.5 Wavelength and Frequency in third and fourth dimension (General theory geometry)

3.5.1 Frequency.

Frequency of the wave was increasing by one unit, with increase of mass energy by one quantum, along with one bound treo layer (one kineton layer) in all sub-kinetic coloumns at each of $\sqrt{S}$ quantum levels in first dimension.

Then the frequency increased by $\sqrt{S}$ number in second dimension, with the increase of $\sqrt{S}$ quanta in packet at each of $\sqrt{S}$ quantum levels

which resulted in increase of √S bound treo layers in radius of each shell (kinetic coloumn of second dimension), present on each apex bound treos along its RC wavelength.

Thus, in combined, at √S quantum levels in first and √S quantum levels in second dimension, the frequency increased from 1 to S along with increased bound treo layers from one number to S number in (respective) kinetic coloumns.

BUT the frequency in third and fourth dimension gradually decreases by 1 with the addition of one new bound treo layer in kinetic coloumn.

With increase of one unit mass at each next quantum level in deformation of third dimension the **frequency decreases by 1** with the addition of each new deformed bound treo (graviton) layer in 'electron black hole'.

While in fourth dimension the **frequency decreases by √S number** with deformation of new √S bound treo layers (with 2n-1 electron black holes in one layer at 'n' th quantum level) in gravitational sphere.

3.5.2 Wavelength.

In first dimension all photon packets formed at √S quantum level **gradually contracts and spreads and on its gradually reducing wavelengths**. **(= S bound treos/number of quanta in packet)** for one quantum in one unit photon, to √S quanta in gamma photon packet.

While in second dimension the **packets will further contract** and will spread on even reduced RC wavelength (= S bound treos/number of quanta in packet) to form one wave on its 2 RC wavelength. In this second dimensional deformation, the increasing angular momentum (2n-1×π) will decide the circumference of its orbit, which is also Compton wavelength of packet. Thus, in both dimensions the packets will go on contracting on its gradually reducing wavelength.

BUT the wavelength in third and fourth dimension gradually increases; with increasing deformation. With increasing value of 'n' (or number of unit masses in body), one new wave will form on increased number of gravitons (2n–1) present in every new 'n' th layer in kinetic coloumn of third dimension.

The wavelength will increase by one unit with formation of each spiral layer in kinetic coloumn of third dimension, it increases as 1 with one graviton in first spiral layer, then it is 2 with three gravitons in second spiral layer, it is 3 with five gravitons in third, 4 with seven gravitons in fourth and so on..... wave length increases by one unit along with addition of 2n-1 gravitons in 'n' th layer and at last quantum level it is $\sqrt{S}$ with $2\sqrt{S} - 1$ graviton in last spiral layer.

Similarly, 2n–1 electron black hole (each of $\sqrt{S}$ spiral layers) are in anyone 'n' th layer of kinetic coloumn on which one wave will form at any next 'n' th quantum level in fourth dimension. (Each electron black hole is made up of $\sqrt{S}$ spiral layer). Thus, in **fourth dimension, at each next quantum level the wavelength will increase by $\sqrt{S}$ units with the addition of $\sqrt{S}$ bound treo layer** along with 2n-1 electron black holes in n th layer.

In the last peripheral layer with wavelength of S bound treos the S layered gravitational sphere of unit black hole, with the gravitational kinetic energy (i.e., v^2 is equal to S^2) of each graviton present at each apex bound treo in its wavelength, will rotate this layer at v or S bound treo distance per second i.e., at the speed of light.

Thus, *formed impermeable layer to photons* and the EVENT HORIZON OF BLACK HOLE is formed. (2 × RC wavelength × π = will be circumference of outer most layer of 'gravitation sphere of unit black hole' and it is also Compton wavelength of wave in this layer.)

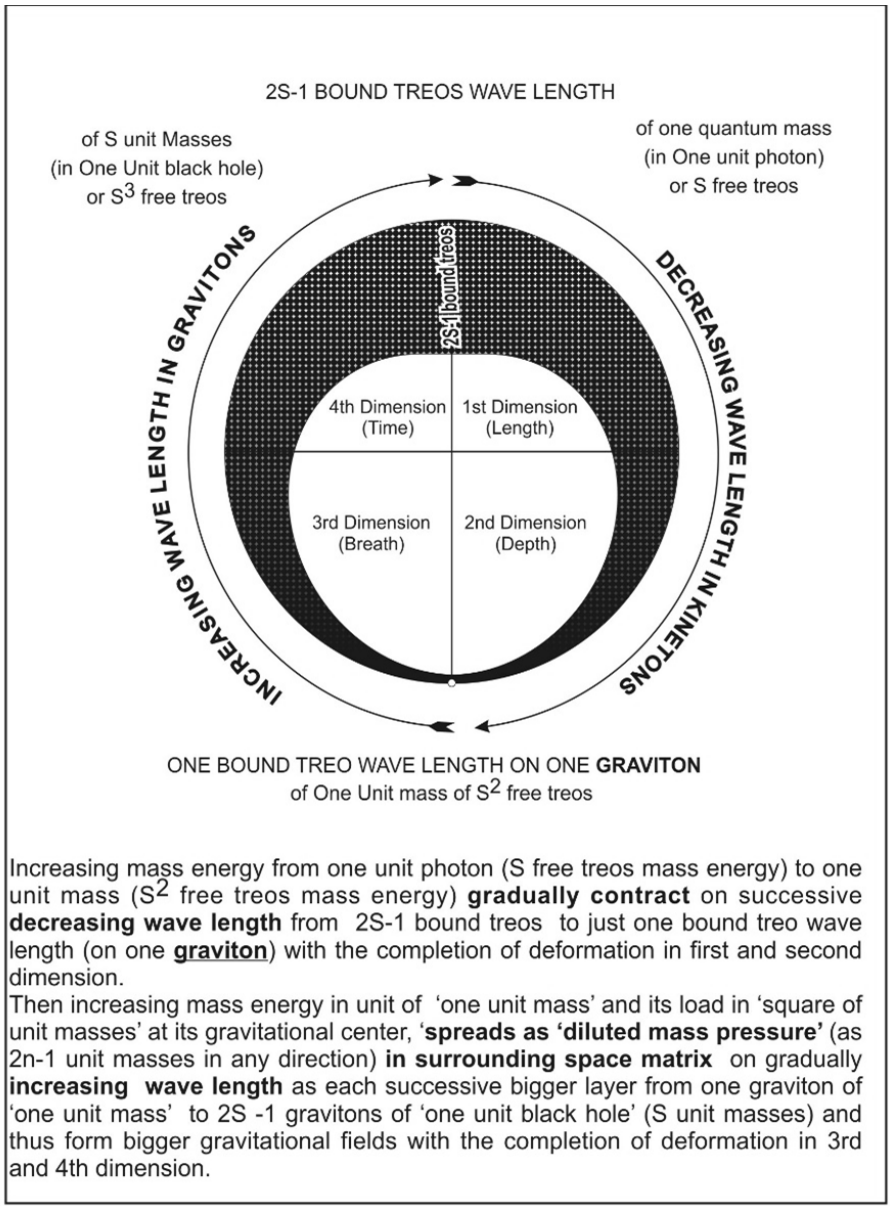
2S-1 BOUND TREOS WAVE LENGTH
of S unit Masses
(in One Unit black hole)
or S^3 free treos
of one quantum mass
(in One unit photon)
or S free treos
INCREASING WAVE LENGTH IN GRAVITONS
DECREASING WAVE LENGTH IN KINETONS
2S-1 bound treos
4th Dimension
(Time)
1st Dimension
(Length)
3rd Dimension
(Breath)
2nd Dimension
(Depth)
ONE BOUND TREO WAVE LENGTH ON ONE **GRAVITON**
of One Unit mass of S^2 free treos
Increasing mass energy from one unit photon (S free treos mass energy) to one unit mass (S^2 free treos mass energy) **gradually contract** on successive **decreasing wave length** from 2S-1 bound treos to just one bound treo wave length (on one **graviton**) with the completion of deformation in first and second dimension.
Then increasing mass energy in unit of 'one unit mass' and its load in 'square of unit masses' at its gravitational center, '**spreads as 'diluted mass pressure'** (as 2n-1 unit masses in any direction) **in surrounding space matrix** on gradually **increasing wave length** as each successive bigger layer from one graviton of 'one unit mass' to 2S -1 gravitons of 'one unit black hole' (S unit masses) and thus form bigger gravitational fields with the completion of deformation in 3rd and 4th dimension.

Figure 3.37: Mass energy packets contract on its reducing wavelengths in first and second dimension, while wavelength increases in third and fourth dimension (Grand Unification).

3.6 Unit Mass and Graviton.

(Planck energy, Planck force, Planck energy density)

One unit mass is S quanta mass energy (or S^2 treos) which is supported by one graviton at its one 'unit gravitational center' by S^2 kinetons, present in one 'graviton coloumn' (full kinetic coloumn of second dimensional deformation).

In increasing deformation at √S quantum levels of second dimension the mass energy increases successively by '√S quanta mass' as one unit, at each next quantum level and thus, finally at last √S quantum level for S quanta mass energy the biggest S layered kinetic coloumn forms, which is now named as graviton coloumn of second dimension.

This S quanta mass is one unit mass conventionally known as 'Planck mass' of 2.176434×10^{-8} Kg (the mass roughly equal to size of one flea egg) is supported by total deformation of second dimensional deformation. One unit mass is a *miniscule black hole* of one Planck mass; as it satisfies the requirement of black hole i.e., $(2GM/c^2)$, which is supported at one bound treo or at one graviton, and it is maximum capacity of space matrix to contract and support a load in universe at one (bound treo) point.

Graviton has no rest mass but *infinite range of action* and as they also maintain the 'tensile strength of space matrix (omnipresent Space-time-energy continuum)' according to value of 'cosmological constant' they are the carrier bosons responsible for **'quantum tangling'** (instant information at large distances) described as 'universal signals' in my previous book (2015) (Reference 14). In a 'bucket full of water' you cannot remove even a 'spoon of water' without its information everywhere to all water particles in bucket.

Graviton is a boson with spin 2. Spin two means that by its half rotation the particle will regain its orientation (to understand it, think of familiar shape of queen of playing cards; by half rotation of this playing card the queen regains its shape).

3.6.1 Planck Energy.

S^2 free treos are in a unit mass (or Planck's mass), which is supported by S^2 kinetons with its total energy i.e., Planck's energy of 1.96×10^9 J in one graviton.

- The energy in one Kg mass when calculated in Joule according to Einstein's equation as $E = mc^2$.
  E = If m is one Kg and c^2 $(3 \times 10^8$ meter per sec$)^2 = 9 \times 10^{16}$ J (Kg× meter ^{2}/ second ^{2}; Dimensional formula of energy in joule; m l ^{2}/t ^{2})
- One Planck mass or unit mass (known value) = 2.176434×10^{-8} Kg
- One Planck mass (energy) = 9×10^{16} J × 2.17643×10^{-8} Kg = 1.96×10^9J
- **But**, as per treo model; one Planck mass (unit mass) = 3.440499×10^{86} free treos energy. (As One Planck mass = 2.176434×10^{-8} Kg × and $1.58079692 \times 10^{94}$ free treos are present in one Kg)[5].
- This energy of one unit mass can also be calculated by equation $E = m\,c^2$.

  Then calculated energy E of 1 unit mass = 1 unit mass × $(1.85485844 \times 10^{43}$ bound treos distance per second$)^2 = 3.440499 \times 10^{86}$ free treos.

  Note that (Speed of light = $1.85485844 \times 10^{43}$ bound treo distance per second)
- **Therefore**, one unit mass = one Planck mass = 2.176434×10^{-8} Kg = 3.440499×10^{86} free treos = and 1.956×10^9 J is mass energy of one unit mass.
- And **GRAVITON has equal number of 3.440499×10^{86} kinetons, thus, this kinetic energy of one graviton is also = 1.956×10^9J, which is *Planck energy.***

5 [2] See calculation of gravitational constant page 135. Then; $2.176434 \times 10^{-8} \times 1.58079692 \times 10^{94}$ = or 3.440499×10^{86} free treos energy is in one unit mass = i.e., S^2 free treos energy = S quanta energy.

3.6.2 Planck Force.

Total kinetic energy of Gravitons placed in 'one–meter length' @as one graviton on one bound treo. 0.618714×10^{-35} bound treos are in 1 meter*; when multiplied by kinetic energy of one graviton = 0.618714×10^{-35} gravitons per meter × 1.956×10^{9} J = we get known value of Planck's force of **1.2102×10^{44} Newton (J per meter)**

* As length of one bound treo = 1.616229×10^{-35} meter or one Planck least length, thus, number of bound treos in one meter length = $(1/1.616229 \times 10^{-35}) = 0.618714\times10^{-35}$ bound treos.

3.6.3 Planck Energy Density.

Total Kinetic energy **of all gravitons placed as one on each bound treo in 'one–meter cube'** is 'Planck energy density' 1.956×10^{9}J × $(0.618714\times10^{-35})^3$ = 4.633×10^{113}J/m^3.

These known values of Planck's energy, Planck's force and Planck's energy density, finds its justification as energy of accumulated gravitons at one bound treo (Planck's energy), at all bound treos in one meter (Planck's force), and on all bound treos in one meter cube (Planck's energy density) is thus, explained and is calculated for the first time.[6]

THINK OF ENERGY, to support load of bodies made up of multiple unit masses multiple gravitons are required. The gravitons are carrier bosons of gravitational forces, and they jointly form kinetic coloumns at gravitational centre (to support increasing number of unit masses load) of bodies, as 'electron black hole', 'gravitational spheres' of all cosmic bodies and 'unit black hole' (where in unit black hole the Gravitons are in 300 thousand Km radius in one kinetic coloumn of fourth dimension or 'gravitational sphere' to support the load of one-unit black hole).

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6 [3] Compare this energy density instead of in 'one meter cube' to the same energy density in '300 thousand km (about 186411.36 miles) sphere' at each point of 'unit black hole' or in a gravitational sphere of 3 km diameter of Sun around its gravitational centre, supporting the load of these bodies.

3.7 Deformation/contraction in all 5 dimensions of Space-time-energy.

After complete deformation of space of 'unit space matrix' in 'third dimensional deformation' and the contraction of multiple space matrixes in 'four-dimensional deformation' which occur with deformation of time as well, as it continues up to contraction of S unit space matrix with formation of S 'electron black holes' in one-unit black hole.

The 20-unit black holes (42 million Sun masses) at the galactic center of our milky way galaxy is supported in all five-dimensional deformation of SPACE-TIME-ENERGY. While presence of stars in the 'three-dimensional spiral gravitational field of galaxy' explains the observed 'galaxy rotation curve' of increasing rotational speed of distal stars.

With still increasing load up to $\sqrt{S}$ quantum levels and in complete 'Fifth dimensional deformation' it contracts Energy as well to form 'gravitational singularities' with complete stoppage of time at gravitational centre of 'super massive black hole' supporting load of S unit black holes. S^2 'unit space matrix' in one sheet of our 'unit universe' will deform to form S^2 unit black holes having S^4 gravitons to support the load of 'Super massive black hole' which is equal to square of unit masses which form its body.

3.7.1 Unit black Hole.

In its complete four-dimensional deformation, the Gravitational sphere of unit black hole with its radius of 300 thousand km (about 186411.36 miles) which is approx. 2×10^5 times bigger than the radius of gravitational sphere of sun.

The mass of such 'unit black hole' is also approximately 2×10^5 times mass of sun approximately (2 lac Sun masses). Total S^2 or $(10^{43})^2$ Gravitons (in S 'electron black holes' formed by contraction of S number of unit space matrixes) are present in this gravitational sphere of one unit black hole (10^{43} layered kinetic coloumn of four dimensional deformation) which supports $(10^{43})^2$ unit masses load at its gravitational centre, exerted by this 10^{43} unit masses body. The body of black hole itself accommodated

inside this gravitational sphere of one-unit black hole and its outer most layer which rotates at the speed of light makes this whole mass invisible inside this event horizon.

2×10^{43} - 1 gravitons (2n-1 gravitons in each 'n' th layer) present in outermost layer of the gravitational sphere of unit black hole, merge together to extend the Gravitational field of unit black hole in one plane and the exerted load of 'r × a free treos' **at each point,** at a distance 'r', is supported by kinetic energy of 'v^2 kinetons' in this Gravitational field.

3.7.2 Galactic Center of our Milky Way Galaxy.

To support 'one Unit black hole' is not the upper limit of potency of Space matrix. 20 UNIT BLACK HOLES or 4.2 million sun masses are present around gravitational centre (galactic centre) of our medium size galaxy 'MILKY WAY GALAXY' which supports this exerted load at the 'common gravitational centre' of galaxy.

The 'central load of galaxy' spreads and is supported at each point at any distance in its Gravitational field by a graviton coloumns in its three-dimensional deformation (named as Galactic Halo); while 20 × S unit space matrix gets curled up at this galactic centre to support this load of galactic center.

3.7.3 Three-dimensional spiral gravitational field of our Milky Way galaxy and 'rotational energy curve of our Galaxy'.

The exhibited observed pattern of increasing orbital velocity of peripheral stars, in 'rotational energy curve of our Galaxy', can be explained by the fact that **this space is rotating as one single rotating disc (where outer part of disc rotates fast) in 'three-dimensional deformation of its galactic gravitational field'**.

This rotation of all stars in galaxy should not be compared with the planetary motion, where **orbital velocity of distant planets reduces, because it is governed by Keplerian dynamics,** as all planets are placed in two-dimensional deformation of gravitational field of Sun.

3.7.4 Super Massive Black Holes (Pillars of universe).

Treo model also postulates, about 'Super massive black hole' which form a kinetic coloumn comprising 'S number of unit black holes', at √S quantum levels in √S energy layers of Fifth dimensional kinetic coloumn (with the contraction of space-time- energy together). These gravitons are formed by contraction of 'S^2 number of unit space matrices' in one full sheet of one 'unit universe'. This calculation of required amount of kinetic energy (dark matter) coming from one sheet of **undeformed** unit universe, only reveals that how our present highly contracted universe of 13.8 billion light years is formed. These 'super massive black holes' as observed are evenly distributed in universe.

3.7.5 Problem of 'Flat universe' and My Hypothesis of Multiverses.

As we notice, our universe is FLAT, as if all galaxies are painted on the outer surface of an expanding balloon, and this configuration could not be explained till now.

This problem can be solved if we agree with the proposed hypothesis 'that our universe is only one branes of multiverse (as postulated out of 26 other universes)'.

The cosmic code 'S' is unique for this brane of our universe, as all 26 parallel universes, each as one brane, are arranged like 'peels of onion', with their *common time of origin and death.* According to the proposed Treo model all will have their different and unique 'cosmic code'. With the different cosmic rhythm of vibration ('cosmic code') and thus the universal constants will also have different values, which will make all these universes unapproachable and undetectable by human beings.

3.7.6 'Gravitational singularity' and 'universal singularity' (Thought on Big bang Model).

In principle one smallest cube of Planck least length can accommodate S^2 number of one dimensional kinetons. This is maximum contraction of

kinetic energy which is postulated in any five- dimensional deformation present around gravitational centre of 'super massive black hole'.

Defying the conventional thinking, If you follow the maximum deformation/contraction of Universe way back up to 'universal singularity' with ***contraction of universe at a point at the time of big bang****, it is clear that whole mass of universe after its full contraction (i.e., which can only contract as* S^2 *free treos in one cube of Planck's least length around gravitational centre of universe or universal singularity), will occupy substantial space as 'primordial universal sphere' and it will also eliminate the need of 'sudden exponential expansion of universe' just after big bang, to explain big bang model.*

Chapter 4

Quantum Gravitation

4.1 Turtles All the Way Down.

Mr. Stephen Hawkins, in his book 'A Brief History of Time', has given the reference of a little old lady who, after listening to a lecture on gravitation, said to the speaker, 'Sir, you may be right on some points, but it is a turtle that supports the Earth.' When the speaker inquired, 'But what supports this turtle supporting the Earth?', the lady said, 'Smart boy, to support this turtle, there are turtles one below the other' (page 1 of the book 'A Brief History of Time', Dr. Stephen Hawkins, 1988).

I would like to point out that the old lady was right; "in fact, there are turtles all the way down". These are deformed bound treos (i.e., kinetons) or energy particles that can accumulate and generate enormous kinetic energy as they get deformed in number equal to the exerted load of free treos they support at each point.

Proposed Treo Model explains which can be summarized that, accumulated as gravitons (S^2 kinetons) in the gravitational sphere (four-dimensional revolving kinetic column) they all together support/neutralize a square number of unit masses load M^2 of a M unit masses cosmic body at its gravitational center; while on its each layer of gravitational field 2M unit masses exerted load is neutralized by equal number of kinetons.

Each graviton in gravitational sphere uncurls its curled-up graviton coloumn outside gravitational sphere to form gravitational field quantum levels and solitary spherical gravitational (coloumn) field of cosmic body.

The "mass pressure of a cosmic body" at any one layer of the gravitational field is always 2 M unit masses; and at any one point in any layer at a distance "r" it is "r a" number of free treos (where "a" is MG/r^2).

In an ACTION - REACTION mechanism this exerted load "r a" at each point is supported by v^2, i.e., an equal number of kinetons present in one kinetic coloumn (v^2 = MG/r); and the total kinetic energy on all 2r-1 number of sub- kinetic coloumns in any layer (present on full length of 'gravitational wave' of this layer) support the total 2M unit masses exerted load of the cosmic body on this layer.

The gradually "diluting central mass pressure" on each concentric, consecutive, increasing-sized layer in the gravitational field also results in gradually reducing deformation of the space matrix, which at definite levels converts in three, two, and then in one-dimensional deformation, until in the last peripheral layer "one free treo" load is supported by one kineton (by the smallest kinetic column of this layer, i.e., the smallest turtle of the story).

Newton calculated the value of the Universal gravitational constant that decides the force of attraction between "two bodies each of 1 kg mass, separated by a distance of 1 meter". But he could not explain **how and why** this force of attraction is generated. (*The conventional value of gravitational constant only marks the* ***size of the area of the space matrix*** *required to support one KG mass*, see New derived value of gravitational constant page 135).

As advocated earlier, "gravitational attraction" is not a phenomenon, but it is only one effect of gravitation. The bodies are *supported* by the force (fields) generated due to the deformation of the space matrix, which is the gravitational phenomenon, according to the proposed Treo model.

Two bodies *will fall towards each other (named as gravitational attraction) because of the deficient kinetic support available to both bodies provided by the* ***common shared space matrix in between*** them. When a body comes within the gravitational field of another body, the space matrix in between these bodies (and supplying supporting gravitons and its graviton columns) is shared by each other. Thus, both bodies share the *available supporting gravitons generated in this shared space matrix in proportion to their individual masses.*

Thus, the smaller body loses the tussle, and with a greatly deficient number of its supporting gravitons, it falls more towards the bigger body.

Even the bigger body is still deficient in some of its gravitons, and it too falls a bit towards the smaller body. As the resultant forces to support both bodies, from the direction between them, are less than the forces from all around supporting them, both bodies are pushed towards each other, which is perceived as gravitational attraction between these two bodies. See cover page of book and page 139.

To explain '**how**', Einstein, in his 'General Theory of Relativity' (which is a pure mathematical model), has described gravitation as 'curvature of space-time', i.e., the deformation of space produced by the mass pressure of a body (e.g., Sun). On these curved paths produced by the Sun, the planets move in their orbits. He said that the Earth and other planets move straight, but it is the path that is curved, due to the presence of the Sun. According to the difference in 'Slope of deformation' produced by each body, it results in the fall of bodies towards each other, to which we notice as gravitational attraction.

Einstein, while describing gravitation by his 'mathematical model' as deformation of space-time, has not described the *mechanism and purpose* (i.e., **why**) of this deformation of space-time.

Thus, we see that both above (although correct) descriptions of gravitation remain incomplete when describing this force.

'Quantum Gravitation' can be described as a reaction by the space matrix to neutralize the mass pressure of a body, which may range from a ***photon to a unit black hole***. Thus, the space matrix, in response to the 'mass pressure of the Sun', generates a 'kinetic energy pool' (gravitational sphere) around the gravitational center of the Sun and to neutralize its mass pressure at a distance, the gravitational field is formed. After being thus supported, the Sun gets converted into a weightless symbolic 'point mass' on the space matrix.

This is the reason that when Galileo simultaneously dropped balls of different masses from the 'leaning tower of Pisa', they all reached the ground at the same time. The 'mass pressure' of all these different-sized balls was neutralized by their individual gravitational fields and, now 'weightless balls', after being converted into 'symbolic point masses', were

affected equally by the (legendary) gravitational field of Earth and thus, they all came down to the ground together at the same time.

Another example of this universal behavior of all bodies, to present themselves as 'symbolic weightless point masses' on the space matrix, is confirmed in planetary motion. The 'speed of revolution of all planets' does not depend upon their individual different masses, but *only depends on their distance from the Sun*: thus, '*v*' is the orbital speed of the baby body affected only by value of 'r'; as ($v = \sqrt{MG/r}$).

The individual masses of all cosmic bodies are neutralized at their gravitational center by their gravitational spheres, while the diluted mass pressure exerted on each layer and at each point on the surrounding space matrix is neutralized by the gravitational kinetic energy generated at this point in their individual gravitational field.

Now, all 'weightless point masses of all these planets on the space matrix' revolve at the speed of '*v*' bound treo distance per second as 'symbolic point masses', only affected by the *gravitational kinetic energy* of the sun (which can be calculated at any point in gravitational field as v^2 equal to Mg/r) present in their orbits.

4.2 Description of Gravitational (coloumn) Field (about Geometry of General theory).

1. Pattern of dispersal of load in a kinetic coloumn to understand: What is "a"?

("a" is Newton's *acceleration*, Einstein's *slope of deformation* and according to proposed Treo model "a" is '*diluted mass pressure of body' at a distance*.)

The exerted load at apex of one kinetic coloumn is distributed on its layers according to the proposed 'coloumn geometry'. To understand this dispersal of load in a kinetic coloumn, we will take the example of a 9-layered kinetic coloumn, which supports 81 or 9^2 free Treos load at its apex. (Figure 2.8).

The 81 'free Treos' 'load' is supported by equal number of 81 'kinetons' present in this 9-layered kinetic coloumn. The total mass pressure exerted at the apex of the kinetic coloumn distributes equally on all kinetons, *up to any layer in the coloumn that is considered*.

If you consider up to the second layer, the 'diluted mass pressure' divides as ¼ ('a') on all three kinetons of the second layers (as a total of 1+ 3 = 4 kinetons are in first two layers of this coloumn), while one kineton of the first layer supports the full mass pressure.

When the third layer of the sub-kinetic column is also considered, it is $1/9^{th}$ of the total mass pressure ('a') on each of the 5 kinetons of the third layer, as there are a total of nine bound treos up to the first three layers of this coloumn (while it is ¼th of the total mass pressure on each kineton in the second layer and full mass pressure on 1 kineton in first layer).

It distributes as $1/16^{th}$ of the total mass pressure ('a') on each of the 7 kinetons in the fourth layer as there are total '16 bound treos to support the load up to the fourth layer in the coloumn', while it exerts 1/9 th of mass pressure on each of 5 kinetons of the third layer and ¼ th of the total mass pressure on 3 kinetons of the second layer and full mass pressure on 1 kineton in first layer.

The same energy distribution pattern of coloumn geometry is seen in K, L, M, N energy distribution of atomic energy in atomic orbits as, K (E energy), L (E/4 energy), M (energy E/9), and N energy levels (energy E/16). (Figure 6.14)

Similarly, the diluted mass pressure 'a' on each of 17 kinetons (2n-1) in the outermost ninth layer is $1/81^{st}$ of the total mass pressure, as it divides on all 81 kinetons (9^2 kinetons) present in this 9 layered kinetic coloumn.

The above-mentioned mass pressure distribution pattern of any mass decides the 'diluted mass pressure' "a" at any point in the kinetic coloumn, in the treo model according to this coloumn geometry.

But traditionally 'a' is Newton's acceleration which can also be calculated by formula, 'a' = MG/r^2. Thus***, 'a' Newton's acceleration is the 'diluted mass pressure' 'a' in the Treo model***.

- If the central mass pressure of 81 'Free Treos' is taken as 'm' which is distributed on 9 layered kinetic coloumn. It calculates **'diluted mass pressure'** or 'a' as 1 free treo (81free treos/on 81 kinetons) at each kineton in last layer according to the coloumn geometry.
- According to Newtons formula, in ninth layer the diluted mass pressure 'a' = m/r^2. The diluted mass pressure 'a' of this 'm' central load on each bound Treo, in the ninth layer (r) of this kinetic coloumn = 81free treos/9^2= is also 1 free treo.
- and ***load*** **of this diluted mass pressure is 'r × a'** (ACTION) in ninth layer at any one apex bound treo is **9** = 9 × 1. (Where 'r' radius ='n' = 9) and ('a' =1)
- 'Total mass pressure' of **'m' number of free treos in body will spread and will exert this equal load** on 'n' or 9 apex bound treos in 9 th layer, of the total mass 'm'= "r a × n" or 9×9= 81 free treos
- While **total exerted Load of 2m (free treos) of the body, is exerted on one full layer** of the kinetic coloumn and will distribute on 17 apex bound treo (or '2n-1' apex bound treos)* = 2 m free treos = 'r a' (2n-1) = 9 (2×9-1) ≈ 9×18 = 2×81 = exerted load which is 2'm' free treos or double the mass of body.
  * as 1 is insignificant at very high values of 'n'.
- We know that alike distribution of EM/mass energy (free treos) of any photon or elementary particle packet which spreads on its half wave, on each apex bound treo on its RC wavelength (= S bound treos/total number of quanta energy), similarly this central load of a body will spread on RC wavelength. While it forms its full wave on 2 RC wavelength.
- Thus, coloumn geometry decides the size of all type of waves, and **one gravitational wave will form on any one full layer of its kinetic coloumn on its total 2n-1apex bound treos.** If "n" is the Reduced Compton wavelength (half of the length of its wave) at

any 'n' th quantum level or in any 'n' th layer, at which the mass (or its mass pressure) of body will spread; then one full wave will form on 2n-1 kinetons present in this full layer of kinetic coloumn (in 1/3rd arc of a circle or orbit).

Coloumn geometry also decides its **angular momentum or the circumference of orbit of this wave** and (2n-1) ×π is the Compton wavelength or full circumference of its orbit.

In this relation, we see that when the total mass (pressure) of a body is exerted on 'n' th layer of kinetic coloumn at any distance 'r', it spreads and is supported on 'n' apex bound treos (present in its RC wavelength, or half the length of its wave, or half of any one layer of the kinetic coloumn). Whereas one full wave will form on all 2n-1 apex bound treos of this one layer of kinetic coloumn, and the circumference of its orbit can be calculated as 2n×π. (Figure 4.1)

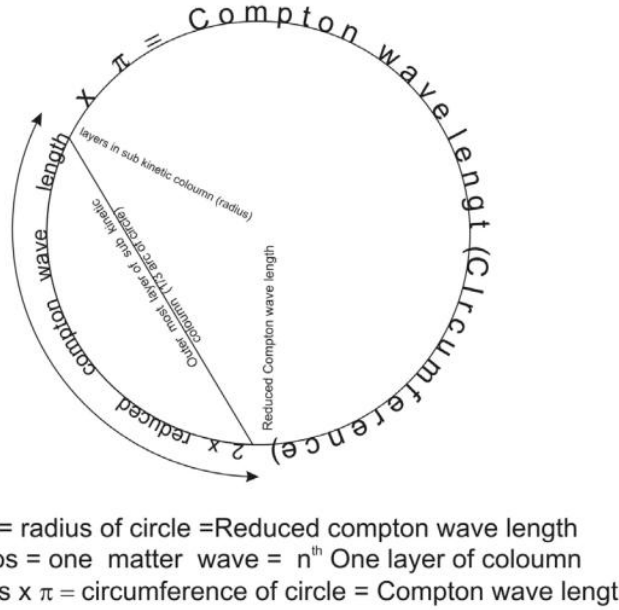
Compton wave lengt (Circumference)
= π x
length wave
Compton
reduced
2 x
layers in sub kinetic coloumn (radius)
Outer most layer of sub kinetic coloumn (TV3 SEC OF CIRCLE)
Reduced Compton wave length
'n' bound treos = radius of circle =Reduced compton wave length
2n-1 bound treos = one matter wave = nth One layer of coloumn
2n-1bound treos x π = circumference of circle = Compton wave length

Figure 4.1: Outer most layer (or any 'n' th layer) has 2n-1 kinetons on which one wave will forms. Here 'n' is reduced Compton wavelength, while (2n-1) × π is Compton wavelength or circumference of circle.

2. The same load distribution pattern we found in gravitational field (in solitary coloumn) of any cosmic body.

Any 'unit masses' body, of weight MG (Kg × G) = or of M free treos (as **conventional value of G only denotes the area which supplies number of kinetons to support one Kg weight made up of equal number of free treos**; please refer to derived value of gravitational constant, page 135.), **exerts a load of M^2 free treos at its gravitational center, which dilutes as 2 M free treos load in one plane, on any one-layer** (i.e. on 2n -1 bound treos) of gravitational (coloumn) field.

We can calculate this value of 'a' or 'diluted mass pressure' of this MG or M free treos body, exerted **on at any one point** (apex bound treo) out of 2n-1 apex bound treos in any layer at distance 'r', by Newton's formula $a = MG/r^2$; or by coloumn geometry as described above.

The 2M free treos is 'total load of the body' exerted on any one layer, which gets evenly distributed (spreads) on all 2n-1 apex bound treos, in 'n' th layer at 'r' distance from gravitational centre of body. This 'diluted mass pressure 'a' at a point 'r' distance from center of body, exerts **'r a' load at each apex bound treo** which can be thus calculated.

This load 'r × a' at each apex bound treo (which are present along full wavelength of gravitational wave) is supported by v^2 kinetons in one sub-kinetic coloumn, while total kinetons in all 2n-1 sub-kinetic columns together forms a wave having (equal number of) total 2M kinetons, to support this exerted load.

This **total gravitational kinetic energy in one layer** (of kinetic coloumn), which supports/neutralizes 2M load of free treos of body, comes from 2n -1 sub-kinetic columns, i.e., v^2 (2n-1) = 2 M kinetons, is present in all 2n-1 kinetic coloumns in this 'n' th layer from the Sun.

At a distance 'r', the **reacting kinetic energy on any one apex bound treo in one kinetic coloumn 'v^2** 'can also be calculated by Newton's formula $v^2 = MG/r$; or by coloumn geometry as described above.

Thus, Newton's equations ($a = MG/r^2$ and $v^2 = MG/r$) only describe the proposed coloumn geometry in the gravitational field of the body. However, this description of gravitational field of Newton **is description of only one-dimensional gravitational field in any one plane of a body.**

But **gravitational force is a four-dimensional deformation of space matrix,** which generates the kinetic energy needed to support the gravitational center of the Sun/cosmic body. Following coloumn geometry **all fields of four fundamental forces are composed of kinetic columns of respective dimension** that follow the inverse square law, meaning that the intensity of the gravitational field, light, charge density, etc. decreases as the reciprocal of the square of the distance 'r'.

Quantum gravity has a positive energy. [Reference 4] In its most basic form, quantum gravitation can be defined as the reaction of space matrix to each free treo, which is supported by a kineton (a deformed bound treo) and thus, it neutralizes the mass pressure of an object, which can be anything **from a photon to multiple black holes** at the center of a galaxy.

All packets of photons and elementary particles and nucleons with mass energy less than the 'unit mass' will spread its mass energy directly across all apex bound treos along its reduced Compton wavelength and will form a full wave on 2 reduced Compton wavelengths, meaning that they all are actually 'wave particles'.

The **reduced Compton wavelength of any packet** (photon or elementary particle or nucleon) is the length over which its electromagnetic or mass energy is spread and is equal to = S bound treos or the speed of light divided by the number of quanta of energy in the packet.

The photon packet is supported by all sub-kinetic columns present at each apex bound Treo along its wavelength, which together form an electromagnetic wave on 2 wavelengths over time.

While each individual rotating kinetic column (shell) at each apex bound Treo along the reduced Compton wavelength of an elementary

particle supports the packet and it form a matter wave on 2 reduced Compton wavelengths over time.

The 'unit mass' or Planck mass (is the maximum load that can be supported at a single point in universe), i.e., at one bound treo on its gravitational center, by a single graviton with its graviton coloumn.

All the gravitons present in one "electron black hole" in the kinetic coloumn of third dimensional deformation can only support a maximum load of one billion metric tons approximately at its gravitational center by its three-dimensional kinetic coloumn.

Even larger cosmic bodies and their load of M^2 unit masses is supported by four-dimensional deformation around their individual gravitational centers, by equal number of gravitons present in the "gravitational sphere" (four-dimensional kinetic coloumn) of the body.

Thus, anybody made up of multiple unit masses, with M unit masses exerts a load of M^2 unit masses at its gravitational center, where each unit mass load at the gravitational center is supported by a graviton (and its graviton coloumn) present in the "electron black hole" with a deformation in the third dimension or in the "gravitational sphere" with a deformation in the fourth dimension.

Afterwards, this central load spreads outside the 'gravitational sphere' and exerts its 2MG or 2 M free treos load on each concentric layer of gravitational (coloumn) field.

The diluting 'central mass pressure' of body supported by 'four-dimensional deformation' around its gravitational centre, when dilutes on surrounding space matrix, it is first supported in a three-dimensional deformation of gravitational field (which acts as a 'mold' which accommodate and shapes all cosmic bodies Spherical) and then in a two-dimensional deformation, where at fixed quantum levels the planetary orbits are formed. In these orbits, smaller bodies (planets, satellites, and rings formed by debris, gas, and dust, e.g., the Ring of Saturn) condense and revolve in their respective gravitational waves.

In the gravitational field of the Sun, after the end of the two-dimensional deformation, the curve or slope of the bowl-shaped deformation (Schwarzschild matrix) of the Sun ends. Finally, in one-dimensional deformation (according to proposed column geometry) the flat gravitational field extends up to its *acceleration zone* (till the last layer of the gravitational field of the body, where **diluted mass pressure of one free Treo is supported by one kineton**).

Thus, the gravitational field of any cosmic body is formed by increasing deformation as 1 dimensional, 2 dimensional, 3 dimensional, and 4-dimensional kinetic coloumns one over other (like the Russian dolls which are built one over other) and spreads vice versa.

4.3 Formation of Spherical Gravitational Field by Uncurling of All 'Graviton Coloumns' in 'Gravitational Sphere' of Sun (formation of Schwarzschild matrix).

The Sun is made up of 10^{38} unit masses and exerts a load of $(10^{38})^2$ unit masses at its one gravitational center. This load is supported by $(10^{38})^2$ gravitons which are present in 10^{38} layered rotating gravitational sphere (four dimensional kinetic coloumn) of the Sun. (It is relevant to mention here as per general theory of Einstein the size of gravitational sphere of the Sun is same of 3 km diameter).

All the gravitons in the gravitational sphere uncurl and unite their graviton coloumns side by side to form a spherical gravitational field of the body which extends outside gravitational sphere.

The 2×10^{38} gravitons in outer most layer of kinetic coloumn of gravitational sphere will form a wave which moves at periphery of this gravitational sphere (on 2n-1 bound treos of this full layer of kinetic coloumn). All gravitons present in this outermost layer of this 10^{38} layered gravitational sphere will together uncurl and merge side by side to further extend the Gravitational field of the sun in one plane outside this gravitational sphere.

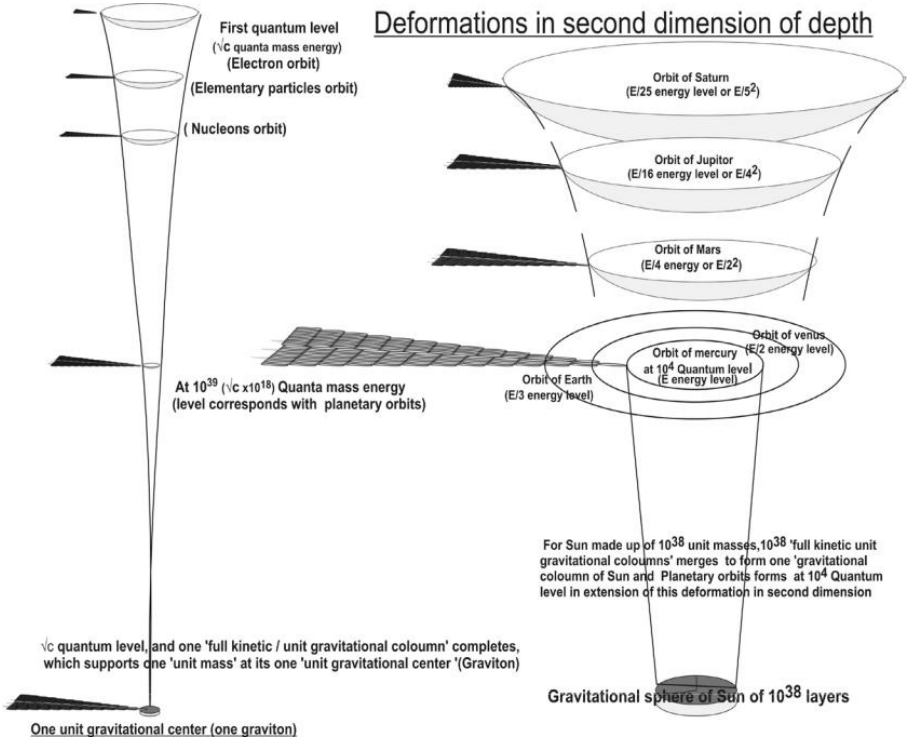
Deformations in second dimension of depth
First quantum level
(√c quanta mass energy)
(Electron orbit)
(Elementary particles orbit)
(Nucleons orbit)
Orbit of Saturn
(E/25 energy level or E/5²)
Orbit of Jupitor
(E/16 energy level or E/4²)
Orbit of Mars
(E/4 energy or E/2²)
Orbit of venus
(E/2 energy level)
Orbit of mercury
at 10⁴ Quantum level
(E energy level)
Orbit of Earth
(E/3 energy level)
At 10³⁹ (√c x10¹⁸) Quanta mass energy
(level corresponds with planetary orbits)
For Sun made up of 10³⁸ unit masses,10³⁸ 'full kinetic unit gravitational coloumns' merges to form one 'gravitational coloumn of Sun and Planetary orbits forms at 10⁴ Quantum level in extension of this deformation in second dimension
√c quantum level, and one 'full kinetic / unit gravitational coloumn' completes, which supports one 'unit mass' at its one 'unit gravitational center '(Graviton)
Gravitational sphere of Sun of 10³⁸ layers
One unit gravitational center (one graviton)

Figure 4.2: In peripheral layer of 'gravitational sphere' of Sun 2×10^{38}-1 gravitons and 2×10^{38}-1 'graviton coloumns' together unite side by side to extend the gravitational field of Sun in one plane (to which we study) while all small matter waves at identical quantum levels of all graviton coloumn unite to form one 'gravitational wave' in planetary orbit.

Identical quantum levels of all 10^{38} –1 graviton columns after the merger of $2x10^{38}$ –1 graviton columns side by side together form "gravitational field quantum levels" on which planetary orbits form, and all small matter waves at identical quantum levels of all graviton columns unite to form one "gravitational wave" in a planetary orbit.

4.4 Any one layer in the gravitational field of the Sun has enough gravitational kinetic energy to support 2 Sun masses load.

The 2 M free treos mass pressure of the Sun (or of anybody) exerted on any layer gets evenly distributed on all 2n-1 apex bound treos in the 'n' th

layer of the gravitational field and is supported by a kinetic coloumn at each apex bound treo.

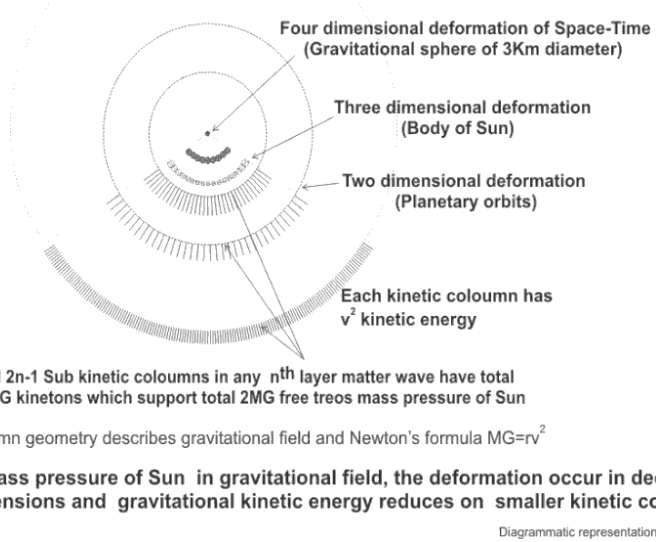
Four dimensional deformation of Space-Time
(Gravitational sphere of 3Km diameter)
Three dimensional deformation
(Body of Sun)
Two dimensional deformation
(Planetary orbits)
Each kinetic coloumn has
v^2 kinetic energy
All 2n-1 Sub kinetic coloumns in any n^{th} layer matter wave have total
2MG kinetons which support total 2MG free treos mass pressure of Sun
Coloumn geometry describes gravitational field and Newton's formula $MG=rv^2$
With diluting mass pressure of Sun in gravitational field, the deformation occur in decreasing number of dimensions and gravitational kinetic energy reduces on smaller kinetic coloumns
Diagrammatic representation not to scale

Figure 4.3: Gravitational Sphere and Gravitational Field of Sun.

But, as 'n' is always equal to 'r', (as 'r' is the distance of this orbit from the sun, in number of bound treos), then the total load of 2M free treos, which is equal to load on all apex bound treos = 'r a'× (2r-1) or [2 r^2a = 2MG of Newtons equation]; and is supported/neutralized by gravitational kinetic energy of total 2M kinetons = v^2 × (2r-1), present in all 2r-1 'sub kinetic columns' in this 'n' th layer at a distance 'r' from the gravitational centre of Sun. Thus, 2 M free treos Load of Sun is supported by one 'gravitational wave' in any 'n' th Gravitational field layer in gravitational field (coloumn) of Sun. The rotating one solitary gravitational coloumn of the Sun forms the gravitational field of Sun.

- When the total load exerted on any 'n' th layer is (2n – 1) × 'r × a' = 2M free treos. Then, at any one apex bound treo, (out of 2n-1 apex bound treos forming this matter wave in the 'n' th layer), the action r × a (load of free treos) at each apex bound treo is reacted by an equal force of v^2 kinetons.
- And at each apex bound treo, 'r × a' = v^2 number of kinetons, which are generated in one '*v*' layered sub kinetic coloumn.

- While the total gravitational kinetic energy in the wave at any 'n' th layer is $(2n - 1) \times v^2 = 2M$ Kinetons.
- The analogous equation that we get in the 'general theory of gravity' is $G = 8G/c^4T$
  This 'r × a' or load is analogous to T (mass pressure, or energy momentum tensor), while G in the general theory equation is Einstein's tensor, which measures curvature of space and generates v^2 or equal gravitational kinetic energy (by equal reaction) at this point.

In these equations radius 'r' of any concentric layer = 'n' is the distance of any 'n' th bound treo layer in gravitational field (coloumn) of the Sun from the center of the Sun; and on 2n – 1 apex bound treos of this layer of kinetic coloumn one 'gravitational wave' of this orbit is formed.

The angular momentum of wave at any distance 'n' is π (2n-1), so the **gravitational wave will revolve in the circumference of its orbit**.

'a' is Newton's acceleration, and in this model, it is the "**diluted mass pressure of Sun**" at each apex bound treo (it can also be calculated by Newton's formula, $a = MG/r^2$, or by the proposed coloumn geometry).

v^2 is the **number of kinetons** in any *v*-layered sub-kinetic coloumn, which are present at each apex bound treo in full wavelength of wave (which can be calculated as total number of kinetons by Newton's formula $v^2 = MG/r$, or by the proposed coloumn geometry).

'*v*' is the **number of bound treo layers** in any one sub-kinetic column, which is equal to the **orbital speed of a planet** placed in this orbit in terms of the number of bound treo distances per second, = the **frequency** of the matter wave, = the **number of quanta load** at this orbit.

MG is the conventional value of the mass of the Sun in kilograms multiplied by the conventional value of the gravitational constant which calculates **M number of free treos**.

4.5 New Derived Value of Gravitational Constant (what it denotes).

After Replacing Meter with Planck Least Length

The gravitational constant, "G," is 6.67430 x 10^{-11} meter^3 per kilogram, per second per second. (Dimensional Formula L^3 M^{-1} T^{-2})

- "G" can be recalculated in terms of bound treos (kinetons) by substituting the value of the meter with the natural unit of Planck's least length which is (size of one bound treo; 1 meter = 0.61871425 x 10^{35} bound treos); G = 6.67430 x 10^{-11} × (0.61871425 x 10^{35})^3 bound treos (kinetons)[7] per kilogram per second per second = 1.58079692 ×10^{94} kinetons per kilogram, per second per second. This also means that this number of kinetons act on 1 kilogram of mass per second per second and will support an equal number of "free Treos" in one kilogram. Thus, 1.58079692 × 10^{94} "free Treos" constitute one kilogram of mass.
- **Alternatively,** the value of "G" can also be denoted by the number of kinetons supporting one unit of mass (S^2 number of free Treos) and = 3.442488398 × 10^{86} kinetons per unit mass, per second per second.[8]
- **Alternatively**, the value of "G" can also be denoted by the number of kinetons acting on one free Treo (as in the case of EM wave of unit photon) and =1 kineton per free Treo, per second per second.

  Then, gravitation as a phenomenon can be explained as G = universal constant = 1 unit action by one free Treo is reacted by one kineton by its 1unit reaction, in one unit time of 1 second i.e., per second per second (i.e., continuously)

DISCUSSION The *conventional value of the gravitational constant* only **denotes the area that is deformed to produce the number of**

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7 [2]Planck Least Length =1.616229 × 10^{-35} meter = size of one bound treo.
One meter= 1/Planck Least Length = 0.61871425 x 10^{35} bound treos. (One bound treo gets converted into one kineton to support equal load of one free treo).

8 [3]As one unit of mass =3.442488398 × 10^{86} free treos are supported by equal number of 3.442488398 × 10^{86} kinetons in one graviton coloumn of one graviton.

kinetons needed to support one kilogram mass, continuously (means per second per second).

Gravitation supports the bodies on the space matrix by neutralizing their exerted load in terms of free treos on the space matrix with an equal number of bound treos which are converted into kinetons, and the gravitational forces erupt in this process.

This can be interpreted as **6.67430×10^{-11}meter cube area** (of un-deformed space matrix) which **supports one kilogram mass per second per second** (continuously).

On calculation, this area of the space matrix: [$6.67430 \times 10^{-11} \times (0.61871425 \times 10^{35})^3$ = will lodge $1.58079692 \times 10^{94}$ bound treos (which after being converted into kinetons) supports per kilogram mass per second per second (continuously)].

As one kineton supports one free Treo; so, one kilogram mass supported by $1.58079692 \times 10^{94}$ kinetons, will have $1.58079692 \times 10^{94}$ free treos.

Substituting the value of G calculated for one kilogram, (as kilogram is an arbitrary unit) for one 'unit mass' or Planck mass, (2.176×10^{-8} Kg).

We get $G = 3.442488398 \times 10^{86}$ kinetons per unit mass, per second per second.

4.6 What condenses mass and Gives Slope towards centre in gravitational field?

What condenses mass of cosmic body and pushes/squeezes the baby body towards the center of body in any Gravitational Field, despite bigger sub kinetic coloumns and dense kinetic energy towards center.

While the gravitational kinetic energy (v^2) of each sub kinetic coloumn in each successive layer towards the sun increases, but the *total gravitational kinetic energy of anyone 'n' th layer on 2n-1 kinetic coloumns, not stays constant but comparatively reduces fast in each successive layer (matter wave) towards the sun*, as the value of the factor –1 increase disproportionately fast.

This happens with decreasing value of 'n' (as 'n' is also equal to radius or distance from the sun) in the equation [$2MG \geq (2n - 1) \times v^2$]. The impact of the –1 factor increases disproportionately fast as 'n' approaches 1, towards gravitational centre of body.

$2MG \geq (2n - 1) \times v^2 \geq MG$ ('r' or 'n' is large and 1 is small)

In each successive layer towards the sun, the value of 2MG kinetons (i.e., the total gravitational kinetic energy in one layer) is calculated to be less than in the next outer layer according to the formula $2MG \geq (2n - 1) v^2$.

For example, see one hypothetical calculation of "total kinetic energy in one layer" from layer number 1 to layer number 10 in gravitational field, which is calculated as 1 MG, 1.5 MG, 1.66 MG, 1.75 MG, 1.80 MG, 1.83 M, 1.85 MG, 1.87 MG, 1.88 MG, and 1.9 MG. This anomaly provides a gentle slope towards the parent body, and thus, the body mass and baby bodies in the gravitational field will slide/fall/squeezed towards the sun due to the total pushing force of one full outer bigger layer.

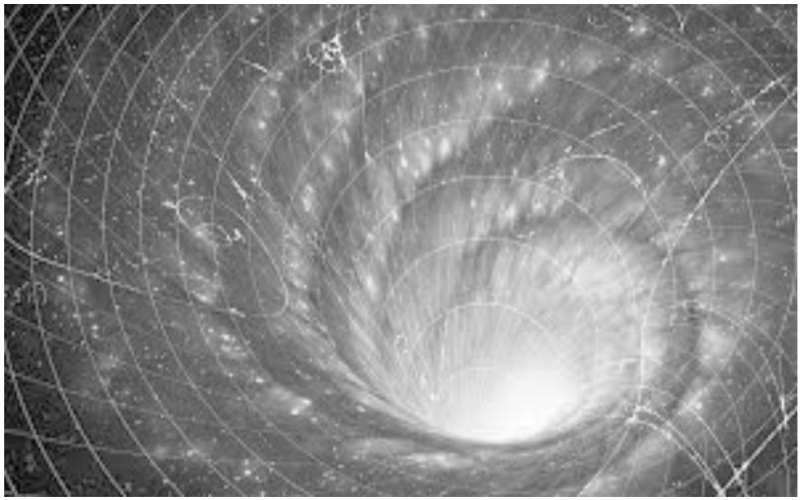

Figure 4.4: Gravitational kinetic energy 2MG in each layer, concentrates gradually towards centre on smaller size orbits. (Gravitational Kinetic energy is present in all kinetic coloumns on lesser number of apex bound treos which forms one wave, and more layered kinetic coloumn) in each small concentric orbits in gravitational field towards sun, as depicted above in figure of Schwarzschild matrix of general theory (i.e., gravitational field of Sun)

4.7 Slowdown of Time as Gravitational Field Strength Increases Towards the Sun (basis of Theory of relativity).

Time slows down in the 'gravitational sphere of the sun' due to the reduction of one vibration per quantum level per second as we move towards the gravitational center.

The same is reflected at each corresponding '√S gravitational field quantum levels' with increasingly contracted space in the gravitational field towards the sun.

This slowdown of time in *gravitational sphere* is required to gradually reduce the speed of rotation of each concentric layer of the gravitational coloumn towards the center so that each inner quantum layer of reducing size (of 2n – 1 electron black hole) of this kinetic coloumn of the gravitational sphere placed at successively reducing radius can rotate simultaneously, keeping the configuration of kinetic coloumn intact. And thus, the whole coloumn, could keep its shape in 1/3 area of the gravitational sphere (in 1/3 arc of a circle) and can exert its total force (of all n^2 gravitons in all "n" bound Treo layers of this gravitational coloumn) jointly at its gravitational center to neutralize n^2 unit masses load at the gravitational center of this 'n' unit masses body, by its S vibrations, while rotating in all S planes (in 360 degree) in one second.

4.8 Gravitational attraction (and what for is gravity).

The body is supported by its gravitational sphere and then by its gravitational field from all sides, but when another body comes in its gravitational field; both bodies share one common space matrix in between.

Gravitational attraction is the fall of bodies towards each other due to the *deficient support to bodies, provided by common shared space matrix in between*. The **number of supporting gravitons** formed in this common shared space matrix, are divided in proportion to their individual weight

of both bodies but remains **inadequate** for both bodies to be supported. (Figure 4.5)

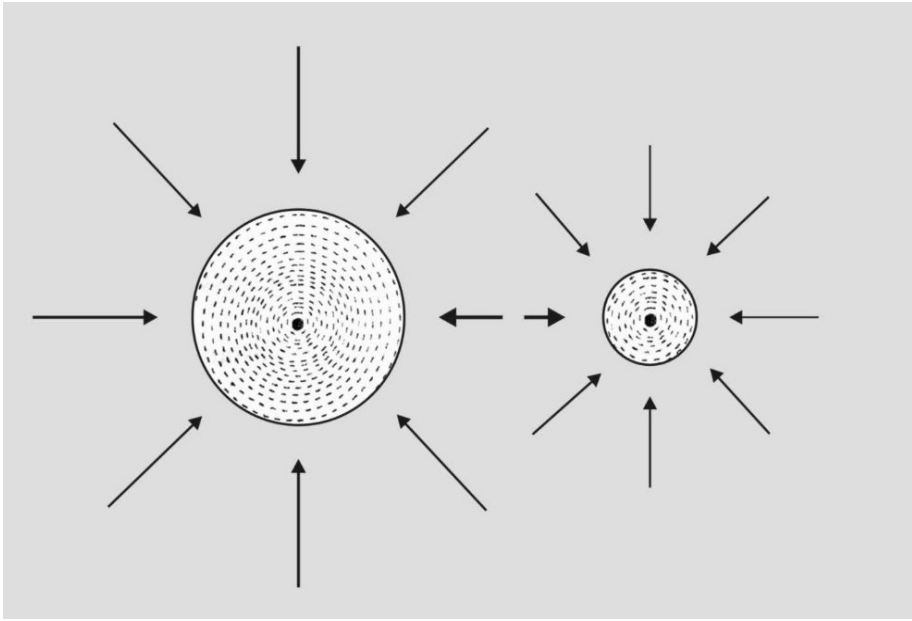

Figure 4.5: All bodies are pushed equally from all sides for being supported; but once another body comes in gravitational field of any body, both bodies get inadequate support (from common shared space matrix in between), and then both fall towards each other, and we perceive this fall of body as gravitational attraction of other body.

Inferences from Treo Model

5.1 Gravitational Field of Sun.

5.1.1 Formation of 'Gravitational Field Quantum Levels' and Gravitational Field (Column) of Sun

As 10^{38}unit mass in the body of Sun, forms a gravitational sphere (four dimensional kinetic coloumn) of 10^{38} bound treo layers having $(10^{38})^2$ number of gravitons to support its load of square number of unit masses in Sun.

In the gravitational field of Sun, outside this gravitational sphere, the first quantum level forms at the distance of $\mathbf{1} \times 10^{38}$ bound treo layers, the second quantum level requires the next $\mathbf{3} \times 10^{38}$ bound treo layers, the third quantum level requires the next $\mathbf{5} \times 10^{38}$ bound treo layers, and the fourth quantum level requires even next $\mathbf{7} \times 10^{38}$ bound treo layers in radius.

According to coloumn geometry, subsequently, $2n\text{-}1 \times 10^{38}$ bound treo layers are added at any next 'n' th quantum level. This continues up to $\sqrt{S}$ quantum levels, till one free treo load is supported by smallest kinetic coloumn having only one kineton.

Thus, the number of bound treo layers up to any desired quantum level = the square of the quantum number × the number of bound treo layers in the gravitational sphere of the parent body (which is also equal to the number of unit masses in parent body).

5.1.2 Number of Bound Treo Layers from the Gravitational Center of Sun, up to the 10^{4th} Quantum Level.

[**In the second dimensional deformation in any gravitational field, at the 10^{4th} quantum level, the baby bodies (planets and satellites) condense**.]

Now, if we calculate the total number of bound treo layers (the distance from the gravitational center of Sun) up to any 'n' th quantum level, it will be n^2 x 10^{38} bound treo layers in the gravitational sphere.

Thus, the distance of the 10^{4th} quantum level from the center of Sun, when calculated in number of bound treo layers, is equal to the square of the quantum level number multiplied by 10^{38} bound treo layers in the gravitational sphere of Sun, or $(10^4)^2$ x 10^{38} = 10^{46} bound treo layers.

5.1.3 All Planets (or baby bodies) are placed at 10 Energy Levels from the 10^{4th} to 10^{5th} Quantum Levels.

We find all the big solar planets in the second dimensional deformation of the gravitational field of Sun, and they are placed at ten energy levels in ten planetary quantum energy levels, between the 10^{4th} and 10^{5th} gravitational field quantum levels.

The orbits of all baby bodies are primarily found at the 10^4 th gravitational field quantum levels in any gravitational field. This is observed for all planets of Sun (see below), all satellites of 'outer planets' i.e., Jupiter, Saturn, Uranus, and Neptune, (Reference 9) and even outside our solar system, for 7 baby bodies of the star TRAPIST 1 (a small star 37 light years away) (Reference 10) and found correct.

5.1.4 Calculation of Gravitational Kinetic Energy in the Orbit of Mercury as 'Em'.

E is equal to the total number of kinetons (v^2) in anyone 'sub kinetic coloumn' at the 10^{4th} quantum level in the gravitational column of Sun, at which the planetary orbit of our first planet Mercury, lies (according to the formula v^2 = MG/r). The kinetic energy in each sub kinetic column in the orbit of Mercury is equal to Em.

Em = $8.776444393 \times 10^{78}$ kinetons = v^2 = Mg/r ($3.145233887 \times 10^{124}$ /$0.3583722239 \times 10^{46}$)

5.1.5 The planets condense at matching 'Gravitational kinetic energy v^2 level' at 'planetary quantum levels.

Gravitational kinetic energy or v^2 in orbit of any planet determines its position at its matching 'planetary quantum level'.

Planet	Kinetic energy E	Calculated	Actual
Mercury	E	$8.776444393 \times 10^{78}$	$8.776444393 \times 10^{78}$
Venus	E/2	$4.38822197 \times 10^{78}$	$4.696829258 \times 10^{78}$
Earth	E/3	$2.925481464 \times 10^{78}$	$3.397352232 \times 10^{78}$
Mars	$E/4(E/2^2)$	$2.194111098 \times 10^{78}$	$2.230118005 \times 10^{78}$
Asteroid belt	$E/9(E/3^2)$	$0.975160488 \times 10^{78}$	
Jupiter	$E/16(E/4^2)$	$0.548527774 \times 10^{78}$	$0.653301797 \times 10^{78}$
Saturn	$E/25(E/5^2)$	$0.351057775 \times 10^{78}$	$0.356398183 \times 10^{78}$
Uranus	$E/49(E/7^2)$	0.1791111×10^{78}	$0.177026782 \times 10^{78}$
Neptune	$E/81(E/9^2)$	$0.108351165 \times 10^{78}$	$0.113015946 \times 10^{78}$
Pluto	$E/100(E/10^2)$	$0.087764443 \times 10^{78}$	0.0860632×10^{78}

If gravitational kinetic energy at each point in First planetary orbit of Mercury is E, than it is found to be E/2 in orbit of Venus, E/3 in orbit of Earth, E/4 or $E/2^2$ in orbit of Mars, $E/3^2$ in orbit of asteroid belts, $E/4^2$ in orbit of Jupiter, $E/5^2$ in orbit of Saturn, $E/7^2$ in orbit of Uranus, $E/9^2$ in orbit of Neptune, and exactly $E/10^2$ in orbit of minor planet Pluto.

Planets and Planetoids are placed at 'planetary quantum levels' or at nodes of one 'solitary solar gravitational wave'. (See Graph)

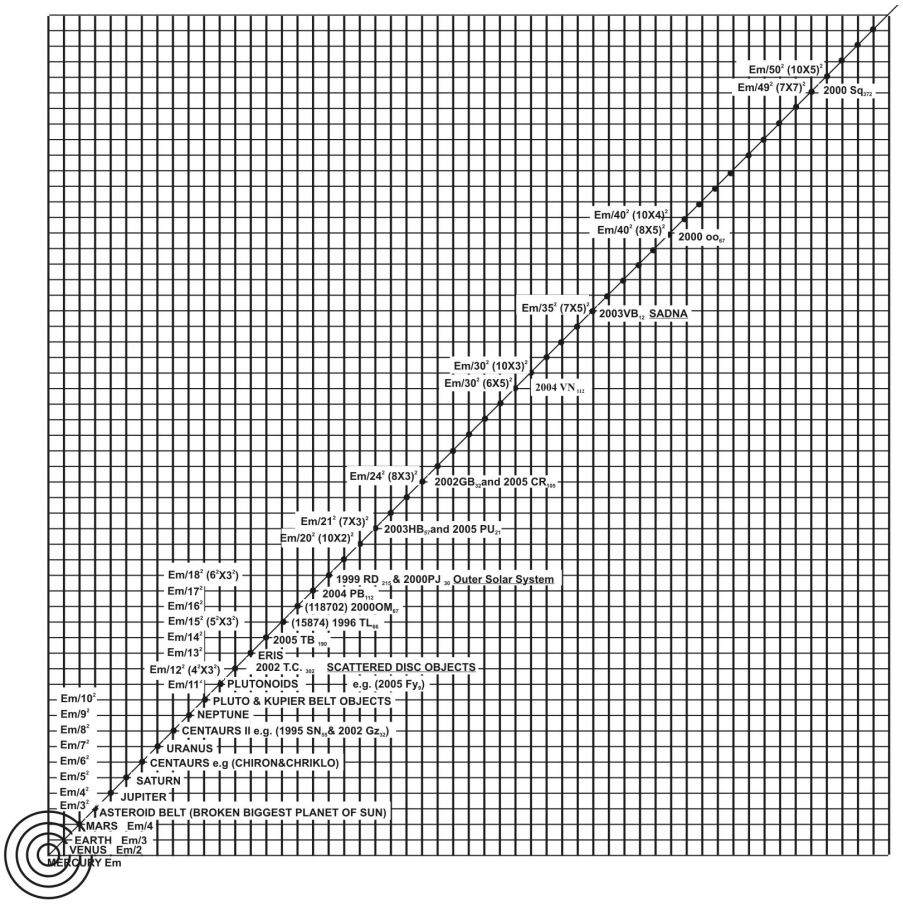

Figure 5.1: Graph of gravitational kinetic energy at 'planetary quantum levels' in gravitational field of Sun.

5.1.6 The biggest planet of our solar system broke down.

It can be noted that in 'satellite orbits of all four outer planets' i.e., Jupiter, Saturn, Uranus, and Neptune they **have their biggest satellite** at gravitational kinetic energy* level ES1/9 or ES1/3^2, while this *energy level* in planetary orbits in solar system harbors 'asteroid belts' at Em/9 or Em/3^2 (where Em is gravitational kinetic energy at each apex bound treo in orbit of planet Mercury).

*(Where ES1 is gravitational kinetic energy in orbit of first satellite at each apex bound treo of all four planets)

The biggest satellite of 'all outer planets' are found is of following diameters.

Jupiter – Ganymede 5262 Km

Saturn –Titan 5780 Km

Uranus –Titania, 1578 Km

and Neptune–Triton 2706 Km

Thus, we can conclude that this quantum level at energy level E/9 or ($E/3^2$) in any gravitational field normally harbors its biggest baby body.

With this logic, it can be presumed that our solar system also had its biggest Planet, at Em/9 or ($Em/3^2$) energy level. But on this level now we found 'asteroid belt'.

It is proposed that the Sun was also having its biggest planet Megaskar (as named by few astrophysicists) at this level. So, all asteroids may be the debris (pieces) of this **broken biggest planet of our solar system**, which would have occupied this energy level.

This biggest planet of Sun broke down after 880 M yr. of its formation about four billion years ago, which resulted in planetary migration and formed asteroid belt.

Its embedded pieces (3- 8) × 10^{21} gm or (significantly more) in body of still forming moon at the time of late heavy bombardment (LHB) period are responsible for uneven density and gravity of moon (lunar Mascon's).

5.1.7 Formation of rings of Saturn.

Due to less density (Saturn in lighter than water; perhaps due to dilatation of local space matrix) the full mass of Saturn could not be contained (accommodated) in its three-dimensional spherical deformation of its gravitational field (which Mold its shape), so the excess gaseous mass

and debris of Saturn overflows and occupy the second dimensional deformation of its gravitational field and condenses along its orbitums.

In this second dimensional deformation of gravitational field of Saturn its Satellites also start condensing side by side, at 10^4 th quantum level as few are seen inside the Saturn rings. Saturn form spectacular Rings along its orbitums.

Though invisible from earth, other distal 'outer planets' also form Rings from their own or captured debris.

5.1.8 Presence of 'Heavy baby body' in Gravitational Coloumn (Field) of parent body tilts inclination angle of other distal baby bodies.

The gravitational coloumn of parent body tilts distal to 'heavy baby satellite' present in its gravitational field (coloumn).

This can be verified, by tilted inclination angel of orbits of satellites, immediately after presence of a heavy satellite in gravitational fields of all 'outer planet' [9]

Similarly, due to effect of very heavy planets Jupiter and Saturn the gravitational coloumn of Sun markedly tilts itself and thus, it also tilts the axis of rotation of Uranus to 98 degrees, and now the body of Uranus rolls in its orbital motion and while rotating in same direction as other planets (i.e., anti-clock wise) due to 98 degrees tilt of solitary solar gravitational coloumn (field) along with its tilted rotational axis the same rotation of Uranus is seen rotating clockwise.

These are Visible Proof of Formation of Gravitational Coloumn, And Their Tilting in Second Dimensional Deformation of Gravitational Field of Any Body. (Figure 5.2.)

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9 Refer to table of satellites in my earlier e- book 'How universe works – quantum gravitation and fifth dimension', Book baby; 1917 (Reference 14). to confirm the tilted inclination angle of 'orbits of distal satellites of outer planets' immediately next to heavy satellite.

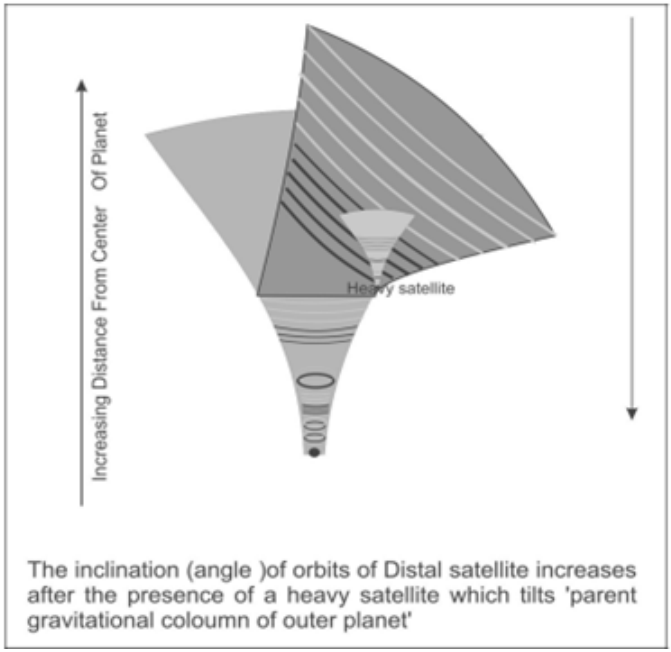
Increasing Distance From Center Of Planet
Heavy satellite
The inclination (angle)of orbits of Distal satellite increases after the presence of a heavy satellite which tilts 'parent gravitational coloumn of outer planet'

Figure 5.2: A heavy satellite will tilt the distal parent gravitational coloumn of planet.

5.1.9 Verification of Quantum gravitation (Treo model) by example of Sun with its calculations at the level of Earth Orbit.

[The wave formed at '10^4 th quantum level in second dimensional deformation of gravitational field of Sun 'and the one formed at '10^{39th} quantum level in second dimensional deformation of unit space matrix, have same wavelengths, as shown by the same speed of orbital motion of the wave, in the quantum world and in planetary orbit]. Wavelength gradually decreases in the first and second dimension. So, at '10^{39th} quantum level in deformation of second dimension of unit space matrix, in still forming graviton coloumn, the RC wavelength of matter wave will reduce to 10^4 bound treo.

This wave is formed in **one small orbit in one graviton coloumn** of second dimensional deformation. This wave of 10^4 bound treo wavelength, finds its match at '10^4 th quantum level of gravitational field of Sun' (as length of waves gradually increase with increasing wave length in fourth dimension).

When orbits of all such waves at this quantum level in total number of gravitons coloumns which form gravitational field of Sun unite, (which are equal to 'total number of unit masses in Sun') it forms 'gravitational wave' of Sun, operating at level of planet Earth in EARTH ORBIT.

In this manner the quantum world (Physics of exceedingly small) is united with 'General theory of relativity' (Physics of exceptionally large) and proves that "all big are made up of many small units".

(A) Formation of Gravitational Field of Sun.

Mass of Sun is $0.91379754 \times 10^{38}$ Unit masses.

The $0.91379754 \times 10^{38}$ bound treo layered 'gravitational sphere' of Sun (kinetic coloumn of fourth dimension) have $(0.91379754 \times 10^{38})^2$ gravitons and its curled up graviton coloumns, which support $(0.91379754 \times 10^{38})^2$ unit masses load of sun at its gravitational center.

These graviton coloumns uncurls outside the gravitational sphere of sun to form **one spherical solitary gravitational field (coloumn) of Sun.**

But the gravitational field of Sun in any one plane (under study) is formed by $(0.91379754 \times 10^{38})$ four dimensional kinetic coloumns of Sun, with extension of graviton coloumns of $2 \times (0.91379754 \times 10^{38})^2 - 1$ gravitons collectively, which are present at periphery of gravitational sphere in this plane.

To form this gravitational (coloumn) field of Sun, up to $\sqrt{S}$ quantum levels of gravitational field, the $0.91379754 \times 10^{38}$ layers in gravitational sphere **add up as one unit** according to coloumn geometry. The first quantum level have $\mathbf{1} \times 0.91379754 \times 10^{38}$ layers, up to second quantum level it adds **three units** i.e., $\mathbf{3} \times 0.91379754 \times 10^{38}$ more layers, at third quantum level it adds **five units** i.e., $\mathbf{5} \times 0.91379754 \times 10^{38}$ more layers, while fourth quantum level adds **seven units** i.e., $\mathbf{7} \times 0.91379754 \times 10^{38}$ more layers, and thus, any 'n' th quantum level will add **(2n-1) units** i.e., $\mathbf{2n\text{-}1} \times 0.91379754 \times 10^{38}$ more layers **and this goes on up to $\sqrt{S}$ quantum levels**.

Thus, the **distance of any desired quantum level** from Sun = square of the desired quantum level number × 0.91379754 × 10^{38} bound treo layers.

(B) Calculation of distance of Earth orbit from Sun.

Distance of orbit of planet Earth from Sun, in bound treos layers = Square of its quantum level number × number of layers in gravitational sphere of Sun.

In the gravitational field of Sun, Earth is situated at 10^4 th or (exactly 1.00658064 × 10^4 th) 'gravitational field quantum level of Sun'.

At square of 1.00658064 × 10^4 th 'gravitational quantum level' of planet Earth i.e.,1.01320458 × 10^8 bound treo layers × when multiplied by 0.91379754 × 10^{38} layers in gravitational sphere of Sun i.e., 0.925863862 × 10^{46} bound treos layers from Sun, is the distance of orbit at which planet Earth is situated.

(This distance calculated in bound treos when converted in Km; we get the conventional mean distance of Earth in Km from sun, which again proves treo model)

At this level of Earth orbit (as 'n' or reduced Compton wavelength is equal to 'r' radius or distance from sun) the Reduced Compton wavelength of Sun at 'n apex bound treo' is also = 0.925863862 × 10^{46} apex bound treos, on which 'M free treos or full mass pressure of sun' spreads on this RC wavelength of its 'gravitational wave of Earth orbit', and is supported by action – reaction mechanism, by one kinetic coloumn at each apex bound treo.

(C) Load of sun exerted at each apex bound treo in Earth orbit, spreads and neutralized at each point by equal number of kinetons in 'one sub kinetic coloumn.'

1. **In quantum world**, in one graviton coloumn at 1.84319077 × 10^{39} quantum level in second dimensional deformation. Mass of 1.84319077 × 10^{39} quanta (in any packet), at 1.84319077 × 10^{39} quantum level (counted from base) of one graviton coloumn forms 1.84319077 × 10^{39} layered kinetic coloumns having

3.3999573×10^{78} kinetons = $(1.84319077 \times 10^{39})^2$ to support this load of 3.3999573×10^{78} free treos.

2. **In gravitational field of Sun**, the 1.00658064×10^4 quantum level of Earth Orbit. corresponds to this $1.84319077 \times 10^{39}$ quantum level of quantum world*

*[Because $1.84319077 \times 10^{39}$ th quantum level *counted from the base* of one 1.855×10^{43} layered full graviton coloumn is 1.00658064×10^4 th quantum level when *counted from apex* of same coloumn. But the angular momentum, of '(90 to 180 degree) in graviton coloumn in second dimension' increases to "(270 to 360 degree) in fourth dimensional kinetic coloumn" and due to this matching, many similar small matter waves convert in to one big gravitational wave only with the difference in the angular momentum of two waves.]

Thus, 1.00658064×10^4 gravitational quantum level of Sun, corresponds to $1.84319077 \times 10^{39}$ quantum level of quantum world with equal number of $1.84319077 \times 10^{39}$ layers in both sub kinetic coloumns.

The same load i.e., 'r a' of 3.3999573×10^{78} free treos is supported by $1.84319077 \times 10^{39}$ layered kinetic coloumns made up of 3.3999573×10^{78} kinetons at 1.00658064×10^4 quantum level at $[(1.00658064 \times 10^4)^2 \times 0.91379754 \times 10^{38}$ bound treo layers] radius of orbit of Earth in gravitational field of sun.

3. Action Reaction Mechanism (Action = Reaction)

(a) **Action 'r a'**

This 3.3999573×10^{78} free treos load is action or 'r × a' (where 'a' is the 'diluted mass pressure' of Sun at distance 'r')

Where 'r' = $0.9258638622 \times 10^{46}$ Bound treo layer distance of earth orbit from Sun: And 'a' = 3.67×10^{32} free treos the 'diluted mass pressure of Sun' at earth orbit.

Therefore $r \times a = 0.9258638622 \times 10^{46} \times 3.67 \times 10^{32} = 3.3999573 \times 10^{78}$ free treo load.

(Here both 'r' and 'a' are calculated in terms of treos, are equal to their conventional values on conversion when calculated in SI units.)

(b) **Reaction 'v^2'**

This load 'r a' at each apex bound treo is neutralized by v^2 kinetons present in 'v' layered kinetic coloumn formed at each apex bound treo in Earth orbit. Thus, 3.3999573×10^{78} free treos load is supported by equal number of 3.3999573×10^{78} Kinetons i.e., v^2 kinetons, in one $1.84319077 \times 10^{39}$ or 'v' layered kinetic coloumn.

NOTE DOWN; v^2 is = MG/r, according to Newton's equations, is same as calculated here as kinetons in one kinetic coloumn.

Therefore Action (r × a) = load 3.3999573×10^{78} free treos at each apex bound treo is neutralized by Reaction (v^2) = 3.3999573×10^{78} kinetons in each kinetic coloumn which form at each apex bound treo.

(D) **At its RC wavelength (on 'n' number of kinetic coloumns) the half gravitational wave in Earth orbit supports M free treos mass pressure of Sun**.

In any 'n' th layer (from sun), in **'n' number of kinetic coloumns** (each having v^2 kinetons) present on 'n' number of apex bound treo in its RC wavelength, the kinetic energy of all kinetic coloumns jointly supports total MG or M free treo 'mass pressure of Sun'. 'n' number or $0.925863862 \times 10^{46}$ kinetic coloumns in this 'n' th layer from Sun (in RC wavelength) multiplied by 3.3999573×10^{78} kinetons (in each such kinetic coloumn) = $3.145233887 \times 10^{124}$ kinetons; support $3.145233887 \times 10^{124}$ free treos the mass energy of Sun* (total M free treos mass pressure of full mass of Sun is exerted on this Earth orbit).

*[1.989×10^{30} kg is mass of sun = $0.91379754 \times 10^{38}$ unit masses constituting the body of sun × $3.44247205 \times 10^{86}$ free treos per unit mass = $3.145233887 \times 10^{124}$ free treos; which are present in sun, as its M free treos mass energy]

(E) 'One full Gravitational wave' in Earth orbit on 2 RC wavelength (on 2n-1 kinetic coloumns in one full layer of gravitational kinetic

coloumn at this level), supports a total 2M free treos load of Sun exerted at Earth orbit.

M^2 unit masses load at gravitational center of Sun, exerts 2MG load or 2M free treos load on any one concentric layer of rotating solitary gravitational coloumn forming Gravitational field of sun. This 2M free treo load is distributed on 2n-1 apex bound treos of Earth orbit and is supported by **2n-1 kinetic coloumns** forming one 'gravitational wave'.

Thus, one gravitational wave at $0.925863862 \times 10^{46}$ th layer of gravitational coloumn on its $2 \times 0.925863862 \times 10^{46}$-1 apex bound treos (at its 2 n–1 apex bound treos) in one full layer of gravitational coloumn of Sun, supports total 2 M free treos which is twice of load of Sun, exerted on Earth orbit.

This 2M free treo load of Sun on Earth orbit is supported by $2 \times 0.925863862 \times 10^{46}$–1 kinetic coloumns × 3.3999573×10^{78} kinetons (in each kinetic coloumn) = $2 \times 3.145233887 \times 10^{124}$ kinetons; In other words, the gravitational kinetic energy in any one full 'gravitational wave' in any layer of gravitational field of Sun can support 2 solar masses. (Same is true for every cosmic body).

(F) Compton wavelength of this 'full Gravitational wave' is the circumference of Earth orbit.

1. One gravitational wave of Sun formed at the level of Earth orbit on 2n–1 apex bound treos when multiplied by π = (2n-1) π = **Compton wavelength of this matter wave** is orbit of Earth = $2 \times (0.925863862 \times 10^{46}$ bound treos -1) × 3.14 (value of π) = 5.819×10^{46} Bound treos = circumference of Earth orbit in terms of bound treos.

This circumference of Earth Orbit can also be calculated as described below by (2), (3) & (4).

2. **Small orbits** (formed in Crompton wavelength of all small matter waves) **at Earth level in 10^{38} -1 Graviton coloumns when joined side by side it forms full circumference of Earth**

orbit. - As Circumference of each small orbit of one graviton coloumn ($2 \times 1.01320458 \times 10^8$) - And Gravitational sphere of Sun have $0.91379754 \times 10^{38}$ layers (it is also equal to number of Unit masses constituting body of Sun). Then $2 \times 1.01320458 \times 10^8 \times 0.91379754 \times 10^{38}$ layers $=5.819 \times 10^{46}$ Bound treos = circumference of orbit of Earth in terms of bound treos.

3. At Earth orbit at distance 'r', **$(2\pi r)$** is the circumference of its near circular orbit Mean distance of Earth from sun = 151.23 million Km = $0.925863862 \times 10^{46}$ bound treo layers = the radius of Earth orbit 'r'; Then ($2 r\pi$) is [2 x $0.925863862 \times 10^{46}$ bound treos]$\times\pi = 5.819 \times 10^{46}$ Bound treos = circumference of orbit of earth in terms of bound treos.
4. In Earth's orbit, **Earth completes its one revolution** in one year Earth revolves @ $1.843190775 \times 10^{39}$ bound treo distance per second × 31557600 seconds (about 1 year) in 365.25 days (about 1 year) = 5.816×10^{46} bound treos = circumference of orbit of Earth in terms of bound treos. These observations are mathematical confirmation of this quantum gravitation model, and thus it also unite quantum physics with general theory of relativity.

5.1.10 Revolution Speed of Earth (confirms this model and Quantum level of Earth orbit)

(A) **Orbital motion of electron in matter wave:**

[At every bound treo in its wave the 'point mass' 'vibrates by number of bound treos present in its wavelength' and then only it is pushed to the next bound treo in its wave.]

Unit electron, in second dimensional deformation rotates and revolves with its matter wave.

Out of S vibrations which occur in one second, all quantum entangled + spin and - spin shells present on each apex bound treos along its $\sqrt{S}$ RC wavelength of unit electron (on which it spreads uniformly) vibrates one by one (by supporting vibrations) and thus, by $\sqrt{S}$ vibrations from

top to bottom in wavelength the **'wave packet of unit electron' in + spin rotates once** but does not move forward in its orbit. After this one rotation of electron packet, by next propelling one vibration it **revolves** to next bound treo in orbit.

And this process is **repeated with – spin electron** as well. By √S vibrations from **bottom to top** in wavelength of the electron packet and after this second rotation of electron packet, by next propelling one vibration, the unit electron packet **revolves** to next second bound treo in orbit, and so it can only move by √S times in one second (Frequency of wave). Thus, it pushes unit electron mass by √S bound treos distance in its orbit in one second.

Thus, unit *electron with half spin regains its original initial orientation only after its two rotations* and revolves in its orbit by √S bound treo distance in one second.

Frequency of matter wave in orbit = number of quanta load exerted at this quantum level = number of bound treo layers in each kinetic coloumn placed at each apex bound treo in its wavelength = equal to the orbital speed when calculated in terms of 'number of bound treo distance per second'.

(B) **Similar is Orbital motion Planet Earth**:

Similarly, planet Earth revolves as 'point mass' (as its load on space matrix is neutralized by its own gravitational field) in 'gravitational wave' of Sun which form EARTH ORBIT.

As we have studied the orbital motion of unit electron, similarly the symbolic point mass (after neutralization of mass pressure of Earth on space matrix by its own gravitational sphere) of Planet Earth, will remain stationary at $1.00658064 \times 10^{4th}$ quantum level, till 1.00658064×10^4 vibrations occur one by one in each of 1.00658064×10^4 shells present at each apex bound treo along its Reduced Compton wavelength (thus wave rotates the point mass of Earth once up (Uttranayam) and then once down (Dakshnayam) in one combined Compton wave length of full gravitational wave in earth orbit).

And only **after all these rotating vibrations (but rotational speed of Earth is also influenced by rotational speed of its nearby planets) by next one propelling vibration the point mass of Earth will shift to next one bound treo** on the gravitational wave of Sun in Earth orbit. (Figure 5.3)

The process will be repeated $1.84319077 \times 10^{39}$ times in one second (as total 1.85539×10^{43} vibrations occur in one second), and thus, the point mass of Earth will move in its orbit by $1.84319077 \times 10^{39}$ bound treo distance or 29.7901838* Km per second which is the known revolving speed of Earth.

It is to be noted that, $1.84319077 \times 10^{39}$ is the **frequency** of wave, $1.84319077 \times 10^{39}$ quanta is the **load of Sun** at this quantum level, $1.84319077 \times 10^{39}$ are **number of kineton layers** in each kinetic coloumn in wave, or **'*v*' number of layers** in each kinetic coloumn.

*(Planck least length is 1.6162×10^{-35} meter; so, the total number of Bound treos present per meter = $1/1.6162 \times 10^{-35} = 0.6187 \times 10^{35}$ bound treos per meter)

NOTE DOWN; Orbital speed of Earth '*v*', calculated according to Newton's equation $MG = r\,v^2$ is same as explained here according to treo model.

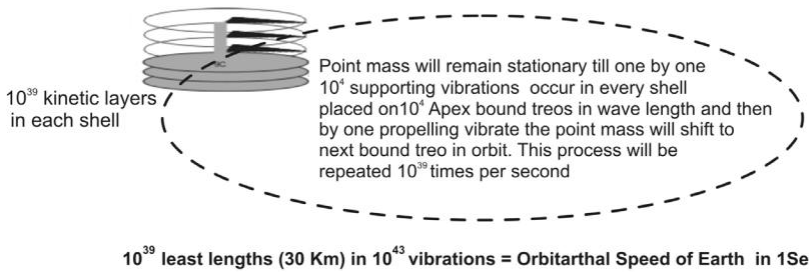
10^{39} kinetic layers in each shell
Point mass will remain stationary till one by one 10^4 supporting vibrations occur in every shell placed on 10^4 Apex bound treos in wave length and then by one propelling vibrate the point mass will shift to next bound treo in orbit. This process will be repeated 10^{39} times per second
10^{39} least lengths (30 Km) in 10^{43} vibrations = Orbitarthal Speed of Earth in 1Second

Figure 5.3: The 'point mass of planet Earth' both rotates 10^{39} times and shifts by approx. 10^{39} bound treo distance in one second, equal to the frequency of Gravitational wave of Sun which form at Earth orbit.

5.1.11 Dark matter and Dark energy, both all are from 'Bound treos'.

Dark matter is believed to make up 27% of the universe and is invisible because it does not interact with electromagnetic radiation. Observations of the rotational speeds of spiral galaxies, the confinement of hot gases in galaxies and clusters, the random movements of galaxies in clusters, the gravitational lensing of background objects and the observed fluctuations in the cosmic microwave background radiation suggest the need for additional gravity, which may be explained by the presence of a large amount of dark matter.

Evidence suggests that the mass of dark matter in galaxies, clusters of galaxies, and the universe is about five times greater than that of ordinary light-emitting matter, which includes stars, planets, satellites, gas, and dust. Einstein first believed that the gravitational collapse of all matter would lead to the "big crunch" and introduced the concept of the "cosmological constant" in his equations of general relativity to maintain a static universe.

However, he later changed his mind when it was discovered that the universe was expanding since the "big bang." In 1998, the Hubble Space Telescope observed an "accelerating rate of expansion of the universe," which revived interest in the cosmological constant, a concept that suggests that space itself has its own energy that causes it to expand, known as dark energy.

All galaxies are moving away from each other, and it is believed that they must have all started from a single point in the past, leading to the hypothesis of the "big bang." While this idea has been supported by evidence, the cause of the big bang still is unknown. This has *led to speculation about the presence of a strange energy fluid or a missing element in current theories that would require a* ***new theory of gravity*** *with an omnipresent field to explain the behavior of the universe*.

We currently know that dark energy makes up 68% of the universe, dark matter is 27%, and visible matter is only 5%.

It is widely believed that dark matter *cannot* cool down by radiating energy, which would allow it to condense and form compact objects like planets, stars, and galaxies. If it could, it might group together in the same way that baryonic matter forms visible objects like planets, stars, and galaxies. Observations suggest that dark matter does not form dense objects like stars, but rather exists as a diffuse halo around galaxies. This makes it unlikely that there are objects made entirely or mostly of dark matter.

It was Einstein who first recognized that **empty space is not empty**. Empty space can possess its own energy and as this is property of space itself, it will not be diluted as space expands faster and faster. Treo model gives exactly the right value and revives 'cosmological constant' to explain everything.

In the past, 'primordial black holes' have been suggested as a potential explanation for dark matter, but the lack of evidence for their existence has led to the hypothesis not gaining widespread support among scientists. However, the detection of gravitational waves by LIGO in 2012 has raised the possibility of a new theory and supports the predicted mass for dark matter. Scientists have previously predicted that the conditions at the birth of the universe would result in the creation of many 'primordial super massive black holes' distributed evenly throughout the universe, along with clustering in halos around galaxies, makes them potential candidates for dark matter.

The Quintessence energy after fifth element of Greek Philosophers; is adopted in Treo model with recognition of Energy as new fifth dimension of universe, along with both of its positive and negative values.

Proposed Treo model calculates that one graviton which supports one unit mass has 'Planck energy'; while one graviton on each bound treo in a meter length collectively generate 'Planck Force'; while 10^{113} j is the value of 'Planck energy density' of all Gravitons on each bound treos in one meter cube. (Page 116)

In 1930, Fritzwicky studied a cluster of 1000 galaxies and was puzzled by their fast movement away from each other without tearing apart. Vera Rubin and Kent Ford could not explain the observed "rotational curve," which referred to the fast rotational speed of distal stars in all galaxies. This phenomenon, known as the "rotational curve of a galaxy," remained unexplained even with the addition of the mass of proximal stars, leading to the hypothesis of dark matter.

The Treo model explains this unsolved mystery, suggesting that 20 "unit black holes" at the center of the Milky Way galaxy create gravitational waves in four-dimensional deformations and cyclonic waves in three-dimensional deformations outside the joint gravitational sphere of 20 black holes, which form the spiral arms of the galaxy in its three-dimensional gravitational field. "When placed in three-dimensional deformation, the distal stars in a galaxy are no longer governed by Keplerian dynamics, which is only valid in the gravitational field of the Sun for its planets and their satellites, all in two-dimensional deformations. These distal stars will rotate quickly, as if they are embedded in a solid rotating disc in three dimensional deformation. This is due to the rotating gravitational field or column of the galaxy, known as the rotating Galactic Halo."

27% or 25% of the universe as dark matter cannot be explained by MACHOS (Massive Compact Halo Objects) or WIMPS (Weekly Interacting Massive Particles) which themselves are produced from 5% visible universe. Machos can only account for a small percentage of the non-luminous mass in our galaxy, revealing that most dark matter cannot be strongly concentrated or exist in the 'baryonic astrophysical objects'. Although micro-lensing surveys rule out baryonic objects like brown dwarfs, black holes, and neutron stars in our galactic halo can other forms of baryonic matter which make up the bulk of dark matter? The answer, surprisingly, is 'NO'. [Reference 44]

A comparison of data from gravitational lensing and gamma ray observations has revealed that regions of the sky with greater concentrations of matter emit more gamma rays. So much of correlation

is due to the action of 'super massive black hole', but some of radiation coming is due to dark matter. [Reference 48]

Models predict that flux of gamma rays can be produced from dark matter when its particle density is large, thus, the gamma ray signals could act as dark matter tracers. It all left us to answer two questions; what binds all matter together i.e., what is Dark Matter and what expands universe i.e., how Dark Energy is produced?

The proposed Treo model not only explains the existence of MATTER, DARK MATTER and DARK ENERGY, but also explains the purpose behind their existence.

All Matter and Anti Matter Is Formed by Free Treos.

The entirety of matter and antimatter, making up 5% of the mass-energy of the universe, is made up of free treos that have accumulated in diverse types of photon packets, fermions, nucleons, and all atoms. Integral multiples of 'One quantum mass energy' (S number of free treos, which are present in one unit photon) form all types of photons of EM spectrum in first dimensional deformation. Whereas the Integral multiples of one unit electron ($\sqrt{S} \times S$ number of free treos) in second dimensional deformation, form all packets of visible matter of universe, which makes up 5% of total universe. Matter particles have an anticlockwise direction of revolution, while anti-matter particles, on the other hand, revolve clockwise in their respective orbits. Charge particles have opposite charges due to opposite directions of their rotation. This is seen in pair production as both Electron and positron having equal mass energy, are negatively and positively charged due to their anticlockwise and clockwise rotations. The bound treos in space matrix (or space itself), is responsible for both dark matter and dark energy.

Bound treos as kinetons is dark matter.

27% of universe is Dark Matter and according to proposed treo model **they all are kinetons** (Activated bound treos).

25% of the universe is activated bound treos i.e., KINETONS, which form all sorts of binding and supporting material of the universe. Dark matter as kinetons; form 'force field' of all four basic forces and act as binding energy of nucleons and matter, and it is the architectural kinetic energy of universe. Any matter (mass energy in terms of 'unit masses') exerts its load on 'multilayered space matrix', in all directions. This total load is equal to the square of the number of unit masses in the body and is neutralized by equal number of gravitons (while one graviton has S^2 kinetons) at its gravitational center.

Thus, to neutralize the load of 5% visible universe the kinetons which form 25% of universe are needed. These kinetons are activated bound treos, and this activation results in contraction of local space matrix. Kinetons are single force provider of universe, which form kinetic coloumn in one, two, three and four dimensions, to construct all bosons and fields of all four basic forces.

Remaining 2% universe is also some type of kinetons which form different binding configurations in atoms, galactic Halos, inter galactic Filaments and 'Cosmic strings' of billions of kms length to construct proposed 'buckyball shaped' architecture of our self-supporting universe.

Kinetons in 'sub kinetic coloumns' produce electro -magnetic fields when they support all photon packets and while rotating, they manifest as 'magnetrons.

Kinetons (Dark matter) form all shells, sub shells and orbitums. Identically oriented and equal energy orbitums (each made up of S kinetons) in each subshell of shells placed vertically one over other all along RC wavelength of packet, together form one orbit. The kinetons in all 'gluons' act as binding energy or atomic energy, which are also present as chromo dynamic energy of nucleons. Nucleon is a composite particle, formed by accumulation of integral number of 'mass units' e.g., 27 mass units form one proton.

Kinetons in 'mass unit' Integral multiples of proposed 'mass units' form all matters particles thus, can be understood as basic unit of matter. Kinetons needed to pack two negatively charged unit electrons together are 68.5 times free treos constituting a 'unit electron'; to counteract the force of repulsion between two similarly charged electrons. This acts as localization energy' (cementing material) with each unit electron. Such Unit electron along with its cementing material is basic unit to form packets of all matter particles and is named as 'MASS UNIT' in treo model. See page 183 and [Reference14]

Kinetons (dark matter) with increased momentum the number of kinetons also increases, with increasing number of kineton layers in all kinetic coloumns, in proportion to increasing speed of body, and thus, they are directly responsible for increase in mass of fast-moving body, and it becomes significant at subluminal speeds. (One postulate of Theory of relativity).

These Kinetons (Dark matter) are present in kinetic coloumns of all bosons, and provide mass to W, Z particles.

All S^2 kinetons in one 'graviton coloumn' get curled up in one graviton. Number of Gravitons which act at gravitational center of 'electron black holes', 'gravitational spheres' of all cosmic bodies, 'unit black holes', 'halos in galactic gravitational fields' and in 'super massive black holes', to support their load is the square of number of 'unit masses' present in these bodies.

These kinetons also act as binding material; in formation of gravitational fields, 'filaments' and 'cosmic strings' and thus, they act as basic architectural material in our self-supporting universe.

Undeformed bound treos is DARK ENERGY, which constitutes 68% of universe.

Remaining 68% of universe is produced by constantly vibrating undeformed bound treos of all space matrixes. They all vibrate simultaneously @ S times per second in S planes. (Figure 1.2) With each vibration the vibrational energy of an undeformed bound treo is absorbed by its adjacent void and is

used to uncurl itself. Un-deformed and continuously vibrating bound treos of all Space matrix constitute 68% universe and its uniform omnipresent potential energy represents itself as Dark Energy.

This energy is responsible for slow and simultaneous uncurling of all 'curled up voids' which results in uniform expansion of our universe. With omnipresent continuous expansion, universe is aging, along with its all living and non-livings; and thus, heading towards its death i.e., for big crunch.

In Treo model 'Energy' has been proposed as the fifth positive dimension of universe and Dark energy is its negative counterpart. Dark energy manifests itself with constant slow uncurling of each void ('curled up five negative dimensions' of universe) which results in simultaneous increasing size of all voids.

This along with churning of matter in gravitational spheres and 'unit black holes' results in accelerating expansion of universe and its rate of expansion decides the value of 'Hubble constant' and 'Cosmological constant', as proposed in treo model. Both processes result in continuously increasing 'total positive potential energy of universe', at the cost of decreasing 'total kinetic energy of universe'.

This is the process of aging of our universe which increases its entropy and prepares it for a big crunch.

5.1.12 Cosmological Constant.

'Cosmological constant' was brought forward by Einstein to explain the model of a 'static universe', but when it was proved that our universe is an 'expanding universe', he admitted that cosmological constant was the greatest blunder of his life. But now a days, the cosmological constant has again emerged, and is being projected as some sort of 'dark energy', which prevents universe from collapsing and results in accelerating expansion of universe. The uncurling of each void at a rate of ***"1/S^2 of the present value of Planck least length"*** is the proposed value of 'Cosmological constant'.

5.1.13 Factors which make space matrix free of wrinkles (all deformations).

(!) **Accelerating expansion of universe which is expanding like a balloon**.

The expansion of the universe, with flow of time, may be explained by the concept of dark energy interacting with negative five dimensional "voids" that are continuously uncurling. This process leads to the "balloon-like expansion" of the universe, meaning that the expansion is occurring at every point simultaneously. The size of each void increases as it uncurls, and this increase is equal to the value of the "cosmological constant" and is the mechanism for the accelerating expansion of the universe.

The expansion of the universe coupled with the churning of matter in black holes which helps to rid the universe of wrinkles in the space matrix. The constant expansion of the universe leads to a decrease in its total kinetic energy and an increase in its total potential energy, resulting in the slow aging of the universe and all its inhabitants.

The goal of this process is the eventual "death" of the universe, or the "big crunch," which will occur when the space matrix becomes fully wrinkle free and each void acquire the size of adjacent bound treo. Once each void gets fully uncurl it will inhale its adjacent bound treo, which will collapse the entire space-matrix of universe.

"Hubble's Law" The universe is constantly expanding at every point, like an inflating balloon, causing the distance between any two points to increase and all galaxies to move farther apart. The expansion distance for two kilometers is twice that of one kilometer, and it will be tripled for three kilometers. Conventionally accelerons (? Voids) are hypothetical particles (that may explain the connection between the recently discovered mass of the neutrino and the dark energy), believed by some physicists to be driving the expansion of the universe.

This idea of the simultaneous uncurling of all voids may help to explain the expansion of the universe. The uncurling of each void at a rate of "$1/S^2$ of the present value of the Planck least length per vibration"

would increase the current radius (S^2 bound treos) of the universe by "one Planck's least length per vibration," which is the speed of light.

Therefore, "one Planck least length/S^2 per vibration" decides the value Hubble's constant H0 "Present value of Hubble's constant" (Conventionally, Hubble's constant or H0 is used in the known formula (v = H0 × D), where "v" is the velocity of the receding galaxy and "D" is the distance of the galaxy.

The rate of expansion of our universe, calculated according to the proposed rate per second per mega parsec in the present contracted size of the universe (approximately 13.8 billion light years), matches the present accepted value of Hubble's constant, which is about 70 (+/- 2.4) km per second per mega parsec.*

*One parsec is 3.26 light years, or 30.857 pentameters (10^{15} meters); one mega parsec is one million parsecs.

"Hubble's Time": 1/H0 = S^2 vibrations ("total life span of the universe is S seconds," from its birth up to the time of its death at the "big crunch"). The present age of the universe is 13.8 billion light years.

"Hubble's Length": 1/H0 x c = (S^2 vibrations is the proposed "life span of the universe" × one Planck's distance) = S^2 Planck's distances; this will be the radius of our universe at the time of "big crunch".

(!!) **Churning of Matter in Gravitational Spheres and Black Holes**.

[But along with expansion, one more mechanism is working to make space matrix flat wrinkle free i.e., free of all local deformations.] To make space matrix flat like a plain sheath with no wrinkles (deformations/ contractions) all matter is being continuously grinded in all type of gravitational spheres. Cosmic bodies, such as the Sun and black holes, attract matter due to their gravitational force. These bodies have gravitational spheres that continuously churn the matter through the production of "Hawkins' energy pairs" of positive and negative energy particles, which can be free treos and voids. This process causes

deformations, or kinetic columns, to disappear, leading to a flattening of the local space matrix. Because of these two mechanisms, the 'total potential energy of the universe' increases while the 'total kinetic energy of universe' decreases, leading to continuous expansion and flattening of the universe and an increase in its entropy.

5.1.14 The end of universe.

While we have a general understanding of what occurred after the big bang, the **events leading up to it remain a mystery**. The matter and space matrix geometry in the universe are preserved if five negative dimensions of voids are curled up. At some point in the future, the continuous uncurling of these voids (five negative dimensions) will align with five positive dimensions of treos. This will result in all treos and their full-sized adjacent voids to engulf each other, leading to the "death" of the universe, or the "big crunch." The collapse of the space matrix of the entire universe around a singularity will convert the dying universe from a 'state of maximum potential energy' to state of 'maximum kinetic energy' in the newly formed universe. This process, in which the big crunch is immediately followed by the 'big bang', marks the start of the life cycle of newly born universe.

Neutralization of Charges and Angular Momentum and Formation of all Matter and Elements

As mentioned in start of chapter of 'coloumn geometry' earlier that with increasing load, it is linear and angular radial deformations of unit space matrix occur together but for sake of description they are explained separately. We have studied the linear deformation in the above text, but below mentioned descriptions will focus on angular deformation of space matrix and to be considered as brainchild for future work. Not only is mass pressure of any load neutralized by space matrix, but local angular deformations of space matrix produced by angular momentum of body is also neutralized by counter rotation of local space matrix.

6.1 Geometries and various manifestations of angular deformation of space matrix.

- **Crest and trough:** With each increase of one quantum EM energy the Angular momentum of photon packet increases by one unit (calibrated by Planck constant); one new EM wave (with its Crest and trough) is added to increase the frequency by one unit. (Page 169)
- **Opposite orbital motions**: In EM waves the crest and trough parts break, after maximum limit of increased angular momentum of first dimension is crossed by EM wave of gamma photon and the pair thus, formed, adopts clockwise and anti-clockwise orbital motion in process of 'pair production'. Along with angular momentum also divides in two, as spin angular momentum and orbital angular momentum of Electron and positron pair. (Page 174)

- **Two charges and two poles of magnet, due to spin angular momentum**: While the electrical vector (of EM wave, electron or any charge particle) is formed by moving free treos as EM or Mass energy, but their supporting and rotating kinetons (deformed bound treos or dark matter) form its magnetic vector by its rotating kinetic coloumns. (Page 180) The superimposition and addition of rotating coloumns (magnetic fields), leads to denser magnetic field lines due to aggregation of rotating layers of kinetic coloumns of many charged particles.
- **Opposite rotations and spin angular momentum**: In formation of all elements of periodic table with each increase of one proton the deformations of empty electron orbits are filled alternately by + and – spinning electrons, at same energy level. (Page 188)
- **Opposite rotations and Opposite charges**: In any atom the proton charge of 1 +eV is neutralized by of 1-eV charge of energetic electrons in all atomic orbits as demonstrated below in Bohr orbit. (Page 195)
- **Opposite rotating fields, and orbital angular momentums**; Rotating gravitational coloumns of cosmic bodies affect the rotational speed of nearby planet, e.g., Sun markedly slowdowns anti clockwise rotations of Mercury; and planet Venus sandwiched between Mercury and Earth rotates in very slow clockwise rotation. (Page 191) Structure and working of universe (Fifth dimension and quantum gravitation), (2015, Reference 14).
- **To neutralize same charge**; It is proposed to pack negatively charged Unit electrons together, in the process of matter formation, first each unit electron will gather kinetons (activated bound treos) 68.5 times of number of free treos in it, by Higgs mechanism to over cum its repulsive force i.e., its negative charge and thus, it gets converted into one 'MASS UNIT' of 35.01 MeV. All visible matter particles and nucleons are made up of integral multiple of these 'mass units', e.g., Proton has 27 mass units. (Page 185)

6.1.1 Formation of Electromagnetic waves and all photons.

(**To understand various phenomena exhibited by Photons its basic structure should be studied.**)

With increasing mass energy by one quantum EM energy (S free treos are in 'unit photon') as one unit, at each of √S quantum levels of first dimension, all √S types of photons of EM spectrum are formed.

The EM energy in all photon packets spread on space matrix along a line on successively reducing 'wavelengths', which can be calculated according to proposed formula; Wavelength in number of bound treos = S bound treo length/number of quanta EM energy in this photon packet.

This uniform spread in a line of EM energy i.e., of free treos on space matrix, it exerts a uniform load on each apex bound treo in its half wavelength which is neutralized @ one free treo by one kineton by formation of one sub kinetic coloumn on each apex bound treos having equal number of kinetons.

Region	Wave length (Armstrong)	Frequency (Hz)	Free treos in packet in terms of S (= 1.855×10^{43})
Radio	$> 10^{9}$	$< 3 \times 10^{9}$	$< 3 \times 10^{9} \times S$
Micro Wave	$10^{9} - 10^{6}$	$3 \times 10^{9} - 3 \times 10^{12}$	$3 \times 10^{12} \times S$
Infra red	$10^{6} - 7000$	$3 \times 10^{12} - 3 \times 10^{14}$	$4.3 \times 10^{14} \times S$
Visible Region	$7000 - 4000$	$3 \times 10^{14} - 3 \times 10^{15}$	$7.5 \times 10^{14} \times S$
Ultra Violet	$4000 - 10$	$3 \times 10^{15} - 3 \times 10^{17}$	$3 \times 10^{17} \times S$
X-rays	$10 - 0.1$	$3 \times 10^{17} - 3 \times 10^{19}$	$3 \times 10^{19} \times S$
Gamma Rays	< 0.1	$> 3 \times 10^{19}$	$> 3 \times 10^{19} \times S$

Figure 6.1: EM energy Spectrum of full EM radiation.

The increase of mass-energy by one quantum in a photon packet at each of the √S quantum levels in the first dimension also increases the angular momentum of the photon packet by one unit. This results in the formation of one additional electromagnetic wave per second for each quantum of mass-energy in the photon packet.

The spin of photon is 1, which means that after its one rotation it will regain its initial orientation.

The "gamma photon" has √S quanta of mass-energy, which spreads out over its √S bound treo wavelength, exerting a uniform load of one quantum (S free treos) on each apex bound treo. This load of S free treos is balanced by an equal number of S kinetons in one √S layered sub kinetic column which forms on each √S apex bound treos in its RC wavelength. At √S th last quantum level of the first dimension, where the last new √S th layer is added to all sub kinetic columns, will add new 2√S -1 kinetons (as 2n-1 kinetons in each 'n' th layer). These kinetons come from 2√S -1 rows each of √S bound treos in length, which are needed to form this last layer of 2√S -1 kinetons in all √S sub kinetic columns present at each of √S apex bound treos (in its wavelength). This means that 'two small squares of √S bound treos, with √S bound treos on each side', will be deformed at the last quantum level.

In translational motion, this packet will move at the speed of light (on √S new apex bound treos in a line by √S vibrations) and will form one wave. A total of √S waves will form in one second (in S vibrations) to support this √S quanta of electromagnetic energy in the gamma photon in one unit time of one second.

6.1.2 Dualistic Nature of All Photons and Matter Particles.

(All Photon, electrons and all elementary particles sometimes present themselves as a wave and sometimes as a particle, and thus, they all exhibit wave particle duality.)

The photon packet can move at the speed of light, only after distributing its all EM energy on its supporting kinetic coloumns @ one free treo on one kineton, as they are always in equal number.

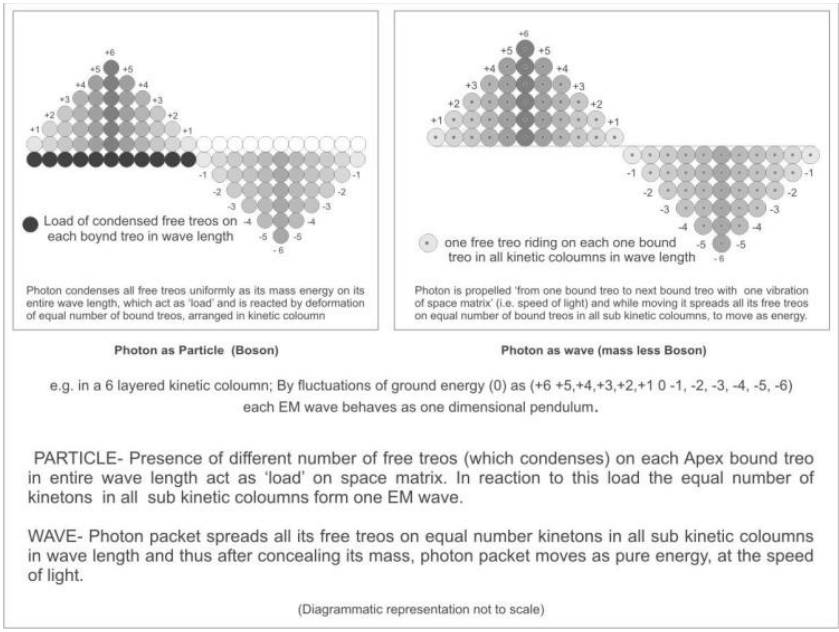
Load of condensed free treos on each boynd treo in wave length
Photon condenses all free treos uniformly as its mass energy on its entire wave length, which act as 'load' and is reacted by deformation of equal number of bound treos, arranged in kinetic coloumn
one free treo riding on each one bound treo in all kinetic coloumns in wave length
Photon is propelled 'from one bound treo to next bound treo with one vibration of space matrix' (i.e. speed of light) and while moving it spreads all its free treos on equal number of bound treos in all sub kinetic coloumns, to move as energy.
Photon as Particle (Boson)
Photon as wave (mass less Boson)
e.g. in a 6 layered kinetic coloumn; By fluctuations of ground energy (0) as (+6 +5,+4,+3,+2,+1 0 -1, -2, -3, -4, -5, -6) each EM wave behaves as one dimensional pendulum.
PARTICLE- Presence of different number of free treos (which condenses) on each Apex bound treo in entire wave length act as 'load' on space matrix. In reaction to this load the equal number of kinetons in all sub kinetic coloumns form one EM wave.
WAVE- Photon packet spreads all its free treos on equal number kinetons in all sub kinetic coloumns in wave length and thus after concealing its mass, photon packet moves as pure energy, at the speed of light.
(Diagrammatic representation not to scale)

Figure 6.2: Wave particle duality of photons and electrons and elementary particles.

Thus, all free treos or EM energy of any photon, gets distributed on all Kinetons present in all sub kinetic coloumns in its wavelength and thus, after concealing its EM energy and converted in a wave, it moves as 'photon wave' at the speed of light (and thus it also explains 'no rest mass of photon). (Figure 6.2 b)

We started to utilize this property of space matrix when we started to send photons and receive them as *radio waves* at fixed frequencies in our radios and wireless. We extended this use of free treos (EM energy) when we started to *send whole frames of one–dimensional deformation of local matrix, produced by bunch of photons of different frequency simultaneously and could receive them on our Television sets*. We *mastered deforming local space matrix by photon energy* to form Wi –fi zones by which we use internet, sends e–mail and WhatsApp messages etc., etc. The 'wave particle duality' is exhibited by all photons and all elementary particles.

This spreading of free treos i.e., EM energy of photon packet or Mass energy of elementary particle, on its supporting kinetic coloumns @ one free treo on its one supporting kineton, also explains mechanism of *double*

slit experiment, quantum tunneling and explains the method of execution of weak forces by W, W+ and Z bosons; as it allows them to cross nuclear and atomic barrier along with the mass energy riding on these bosons, and thus, they could transport very heavy alpha and beta particles. (Figure 6.2 b)

Any type of packet (when confined) distributes its total mass energy uniformly on all apex bound treos along its RC wavelength and thus, behaves as particle. (Figure 6.2 a) Thus, when photon packet is confined, then it behaves as a particle and one energetic photon of sufficient EM energy (frequency = number of quanta in packet), pushes one free electron from metal surface, to produces photo electric effect and thus, we generate electric power from Sun and our eyes could see and brain could perceive this beautiful colored world. (Fig. 6.2 a)

Similarly, in any electron packet (or in any elementary particle packet) its each quanta mass energy (S number of free treos) is supported, as it spreads on one orbitum (each made up of equal number of S kinetons), and thus, total number of quanta mass energy in any such packet, spreads on equal number of orbitums present in all sub shells, of shells forming its matter wave.

Thus, each free treo of a energetic electron rides and moves on one kineton as distributed charge. (Figure 6.2 b) Or it can condense and uniformly distribute this electron mass energy (or of any packet in free treos), on all apex bound treos along its RC wavelength and this load on each apex bound treo is supported, rotated, and propelled by each one shell (kinetic coloumn) present at each apex bound treo in its vertical wavelength, and then this electron behaves as a particle and can be used as electric power. (Figure 6.2 a)

Sine EM waves are pendulum fluctuation of kinetic energy levels of all 2n-1 kinetons in any one layer of kinetic coloumn e.g., all 15 kinetons present in outer most 8 th layer in one 8 layered sub kinetic coloumn of 8 quanta energy photon, fluctuates its energy from base energy between + 8 to -8, as in a pendulum which vary from ……-8, -7, -6, -5, -4, -3, -2, -1, 0, +1, +2, +3, +4, +5, +6, +7, +8 … to form crest and trough of EM wave and also provides different magnetic momentum to each kineton in this layer (as in Figure 6.3).

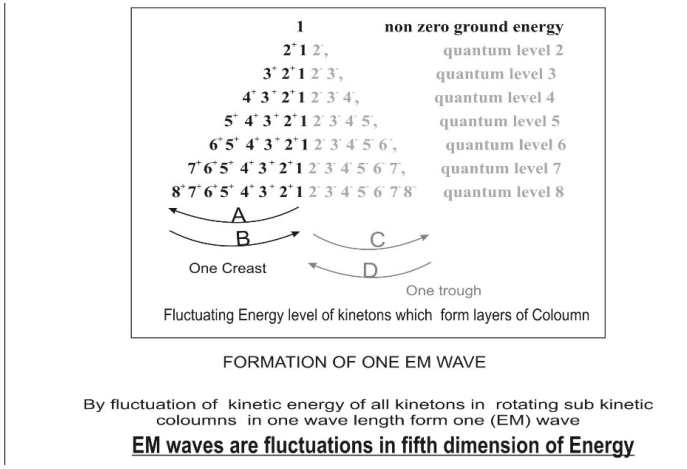
1 non zero ground energy
2+1 2-, quantum level 2
3+ 2+1 2- 3-, quantum level 3
4+ 3+ 2+1 2- 3- 4-, quantum level 4
5+ 4+ 3+ 2+1 2- 3- 4- 5-, quantum level 5
6+5+ 4+ 3+ 2+1 2- 3- 4- 5- 6-, quantum level 6
7+6+5+ 4+ 3+ 2+1 2- 3- 4- 5- 6- 7-, quantum level 7
8+7+6+5+ 4+ 3+ 2+1 2- 3- 4- 5- 6- 7- 8- quantum level 8
A
B
C
D
One Creast
One trough
Fluctuating Energy level of kinetons which form layers of Coloumn
FORMATION OF ONE EM WAVE
By fluctuation of kinetic energy of all kinetons in rotating sub kinetic coloumns in one wave length form one (EM) wave
EM waves are fluctuations in fifth dimension of Energy

Figure 6.3: Energy fluctuation of kinetons in kinetic coloumn which produces sine wave.

6.1.3 Pair production.

(Electron & positron formation).

When one biggest gamma photon packet of 1.02 MeV ($2\sqrt{S}$ quanta EM energy) exert one quantum load of S free treos at each of $2\sqrt{S}$ apex bound treos on its unstable full wave of $2\sqrt{S}$ wavelength; it will be neutralized by equal number of S kinetons in each $\sqrt{S}$ layered sub kinetic coloumns present at all apex bound treos.

Due to kinetic push of S kinetons (one quantum ground kinetic energy of deformation in first dimension) this deformation of each sub kinetic coloumn (also equal to ground energy of first dimension) of gamma photon, instead of shifted linearly to next bound treo with next vibration (to be moved at speed of light), all will start rotating at same apex bound treos, and will be converted in one Orbitum. This will also change the orientation of packet from horizontal to vertical.

EM energy of this energetic gamma photon spread @ one free treo on one kineton in wave motion (along with its 2 $\sqrt{S}$ full sub kinetic coloumns) will also divide with the EM wave in two and will use, from crest $\sqrt{S}$ full sub kinetic coloumns and from trough portion $\sqrt{S}$ full sub kinetic coloumns, to form 'one positron- electron pair'. This division of wave is as if two rails of

railway track curls in two circles one on each side and thus, first out of all 2 √S sub kinetic coloumns √S sub kinetic coloumns in crest with positive energy will start rotating clockwise (above baseline) as one positron and then √S sub kinetic coloumns with negative energy in trough will start rotating anti – clockwise (below baseline) to form one electron. (Figure 6.4)

As each rotating sub kinetic coloumn of one quantum kinetic energy without moving forward at its each apex bound treo start rotating one by one with each vibration, will all turn in to √S orbitums for both particle and antiparticle and both will now adopt vertical orientations.

√S Layered rotating each sub kinetic coloumn will rotate in √S bound treo radius of one orbitum, and while rotating it will make a disc of $(\sqrt{S})^2$ bound treos area and 2√S bound treo circumference. Thus, one orbitum formed at each apex bound treo will now support one quantum load of S free treos by its one quanta kinetons i.e., S kinetons (converted from S bound treos of one small square and condensed in 1/3 rd area of disc) by its one rotation in one second.

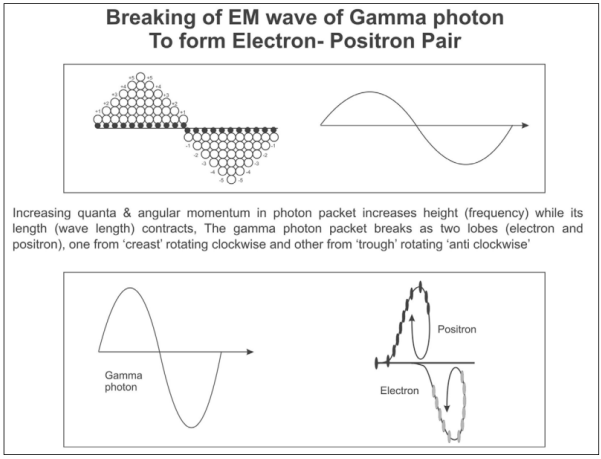
Breaking of EM wave of Gamma photon
To form Electron- Positron Pair
Increasing quanta & angular momentum in photon packet increases height (frequency) while its length (wave length) contracts, The gamma photon packet breaks as two lobes (electron and positron), one from 'creast' rotating clockwise and other from 'trough' rotating 'anti clockwise'
Gamma photon
Positron
Electron

Figure 6.4: Breaking of Gamma Photon EM wave for pair production: EM wave of gamma photon with double units (2 √S) of the angular momentum, instead of moving forward, will divide along its 2 √S bound treos length at last quantum level, where crest part in one half of EM wave on √S apex bound treos will rotate clockwise to form a positron while trough part of EM wave on another half on √S apex bound treos will start rotating anti–clockwise to form unit electron.

Compare one orbitum with one EM wave as both are produced as Pendulum motion of one quanta mass/EM energy and support it. Thus, in any photon packet the number of waves formed is equal to total quanta mass energy in any photon packet; and then all EM waves together will support this photon packet energy of each quantum one by one in one unit time of one full second.

The limiting factors after which EM wave will divide in two for 'pair production' After crossing these maximum limits of all below mentioned factors, which also decides the boundaries of formation of EM wave, this sine wave will divide.

- When the load supported at each apex bound treo reaches the maximum limit of one quanta or S free treos, equal to the base energy of first dimension of space matrix. (Which decides the upper limit of free treo packet to remain as photon).
- The increasing angular momentum reaches to maximum of √S units by which it forms maximum number of √S EM waves in one second. As after this limit further increase of angular momentum even by one more unit will break this sine EM wave into two circles.
- When fluctuation of base energy becomes maximum in √S rows of √S length which are added at last √S th quantum level (as all together will form last biggest one layer in all √S sub kinetic coloumns) reaches its maximum of +√S kinetons to -√S kinetons. (Figure 6.3)
- Finally, after this upper limit at last √S quantum level of first dimension, when the *length* of spread of packet on √S bound treos (wavelength) becomes equal to the number of layers in each sub kinetic coloumn i.e., in *breadth* with maximum √S frequency for EM wave for this √S quanta mass energy in packet. [As no EM wave can form; with wavelength less then frequency as then geometrically EM wave cannot maintain its sine wave character]

Any further increase of mass energy from √S quanta mass energy, will make this EM wave of gamma photon of 1.02 MeV unstable and it will break in two, to form two packets (one electron and one positron both of 0.51 MeV) and both will start continuously rotating on its all rotating orbitums and will revolve in a cog wheel motion in its individual orbits; it will revolve clockwise to form positron of 0.511 MeV i.e., of √S quanta mass energy, while mass energy along with another half of wave will revolve anti-clockwise to form a unit electron of 0.511 MeV mass energy i.e., √S quanta mass energy.

This process of breaking energetic gamma photon is called 'period doubling bifurcation' (Figure 6.4). In pair production Angular momentum (of photon packet) divides in spin angular momentum and orbital angular momentum of electron. Now from spin 1 in photon packets it becomes spin ½ for electron packet, i.e., and now particle will regain its original orientation only after two rotations of packet. {all shells present on each of √S apex bound treo in RC wavelength of electron, vibrates with each vibration one by one from top to bottom by which packet will rotate once and then back again with each vibration from bottom to top; this packet will rotate once more, to regain its original orientation only after two rotations of packet}.

With orbital angular momentum, newly formed unit electron (or positron) of √S quanta mass energy, with its each one quanta load (S free treos) supported by one orbitum (made up of S kinetons),while rotating continuously will remain stand still without advancing forward, till all √S vibrations occur one by one in each shell along its wavelength to support it with one rotation; and only then by one next propelling vibration this electron packet will be shifted to next apex bound in orbit, and this cog wheel process will repeat √S times in one second (in S vibration) to move this packet by √S bound treos distance in one second in its orbit (orbital speed of electron) on thus, formed matter wave. The 'positron' will revolute clockwise in its orbit as an anti-particle and the anti-clockwise revolution in its orbit will be of electron (particle).

6.1.4 Charge.

- 1eV, or one–elementary charge $1.602176634\times10^{-19}$ coulomb; is the charge of one unit electron. (Known value)
- But one unit Electron is made up of 1.44×10^{64} free treos. (Treo model)
- Therefore, the charge on one free treo is $1.1121\ 67\times10^{-83}$ coulomb. ($1.602176634\times10^{-19}$ coulomb/1.44×10^{64} free treos in one unit electron = 1.11261604×10^{-83} coulomb)
- Thus, one coulomb charge is on 0.898782656×10^{83} free treos. ($1/1.11261604\times10^{-83} = 0.898782656\times10^{83}$ free treos)
- Or one coulomb charge is on 6.2415×10^{18} electrons. (Conventional and according to treo model)
  Number of free treos which has one coulomb charge/number of free treos in one electron = number of electrons having one coulomb charge. ($0.898782656\times10^{83}/1.44\times10^{64} = 6.2415\times10^{18}$ electrons)
- Charge mass ratio = 1.7588×10^{11} coulomb/Kg (Known value) (1.5808523×10^{94} Free Treos are in one Kg mass (treo model) [10] [11]

At first quantum level of second dimension, 1 quantum (S free treos), is the load at each of √S apex bound treos along RC wavelength of unit electron, and thus √S quanta mass energy of unit electron (which have 1 eV charge) will spread on √S orbitums in one matter wave.

The elementary charge of 1eV is the charge of this one-unit electron i.e., (on √S× S free treos; or on 1.44×10^{64} free treos) and it divides on √S apex bound treos along its RC wavelength, and thus, distributes as charge of S free treos (or of one quantum free treos) at each apex bound treo at first quantum level of second dimension.

RADIATION OF CHARGE ON SPACE MATRIX (as per treo model). One free treo is the minimum load at first quantum level of first dimension as S free treos of unit photon spread on S apex bound treos on its S bound

10 [1] (0.898782656×10^{83} free treos have one coulomb charge)

11 [2] See calculations of gravitational constant on page 135.

treos wavelength and is supported by one Kineton, while each free treo will have $1.11261604 \times 10^{-83}$ coulomb charge.

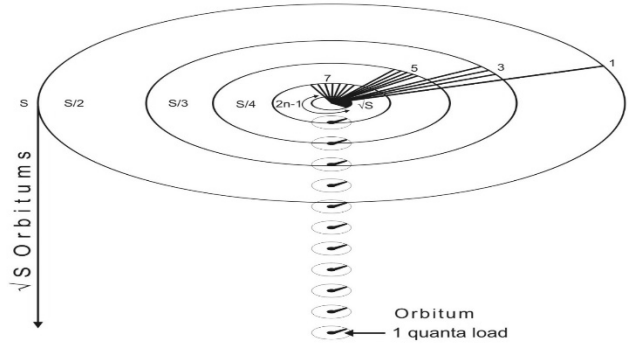

Figure 6.5: 1 eV charge on one unit electron radiates as one free treo on one kineton (as radiating charge from point source). In two-dimensional deformation at first quantum level, one quanta load is exerted by unit Electron at each of √S apex bound treo in its RC wavelength, thus √S orbitums will support 1 eV charge of unit electron as mass energy spreads @ one free treo on one kineton on all orbitums in wave.

According to the concept of wave-particle duality as described by treo model, the mass-energy in a packet can either be concentrated at points at each apex bound treo along its wave length or it can spread out on each kineton (@ one free treo on one kineton) over all orbitums in all sub shell of shell present along its wavelength.

This means that one quantum or S free treos will spread out at each kineton over an orbitum made up of S kinetons. The direction of rotation of these free treos, in a rotating positron or electron creates positive and negative charge (same is explained by the theory of isospins and quarks).

The motion of these free treos, which are spread out over the kinetic coloumns, along with the forward motion of the rotating kinetic coloumn (shell) of a charged particle on a wire, if it appears rotating clockwise (i.e., positive charge) when seen from behind then it will be

seen anti-clockwise (i.e., negative charge) when seen from the front. This is how positive and negative charge is created and cannot exist individually.

The anti-clockwise rotating free treos with kinetons on the rotating layers of shells will exhibit a negative charge and are directed towards charged particles (due to centripetal force), while the clockwise rotating free treos with kinetons on these layers will exhibit a positive charge and are directed away from charged particles (due to centrifugal force).

The opposite charges on protons and electrons in an atom combine to produce electrostatic forces, while the magnetic field exerts a force in a perpendicular direction, causing a change in the direction but not the speed of moving charged particles.

The angular momentum of photon or in a particle can be divided into spin angular momentum (responsible for the rotation of the orbitum on its axis) and orbital angular momentum (responsible for the revolution of mass-energy in its orbit). The flow of rotating free treos in units of one electron packet on electric wires is known as moving charge as electrical vector, and the supporting kinetons (magnetrons) in the rotating layers of their supporting kinetic coloumns (shells, with sub-shells and orbitums) form the magnetic field and magnetic vector.

When any moving energetic electrons on a wire is slowed down by a resistance, they can shed off one unit of charge as one unit (free treos in one electron packet) or multiple units of charge along with the transfer of the kinetic layers (with reduced number of kineton layers with reduced speed) on which these free treos are riding as mass energy. This transfer of unit charge and energy, of free treos along with transfer of its supporting kineton layers, from donating energetic electron to receiving electron is known as electric power and is used in various electric motors.

As the mass-energy increases by one unit electron mass in deformation of second dimension along with its increases 1eV charge and thus, it can form from unit electron to million eV electron, and thus formed energetic electrons form at its matching quantum level with its gradually decreasing wavelengths and increasing electron packet densities.

6.1.5 Electricity and Magnetism Redefined.

The electric field is created by a scalar source, which is the electric charge or number of electrons. The charge can be positive or negative, depending on the direction of the spin of the electrons. The magnetic field is created by a vector source, a current element with both magnitude and direction. The electric field is along the radial vector connecting the source and the field point, while the magnetic field is perpendicular to both the radial vector and the current element vector.

Magnetic fields can be formed around any moving electron, or along the path of rotating layers of kinetic columns in any moving charged particles. Magnetism is caused by the motion of 'magnetrons' (kinetons) in the rotating and propelling layers of kinetic coloumns, which supports and pushes the central charge, such as an electron, along its axis.

When you plot the magnetic lines of force of a bar magnet using iron filings, the lines plotted on paper represent the position of layers of revolving kinetic columns. Magnetism is indirect evidence of the existence of kinetic columns.

The rotation of these shells (kinetic columns) not only causes the spin of electrons, but also causes them to move in a linear direction. The strength of the magnetic and electric field decreases inversely with the square distance between the source and the field point. This pattern of decay in the strength of the magnetic force indicates that

the magnetic fields are arranged according to the proposed coloumn geometry.

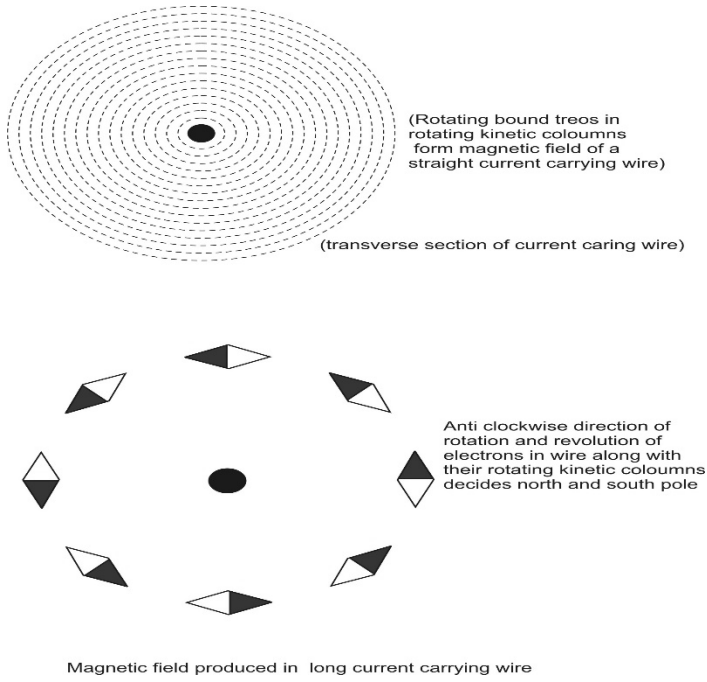
(Rotating bound treos in rotating kinetic coloumns form magnetic field of a straight current carrying wire)
(transverse section of current caring wire)
Anti clockwise direction of rotation and revolution of electrons in wire along with their rotating kinetic coloumns decides north and south pole
Magnetic field produced in long current carrying wire

Figure 6.6: Rotating kinetons in rotating orbitums of sub shells with each shell present at each apex bound treo in RC wavelength of each Electron, forms magnetic fields, while electrons are moving as electric current on current carrying wire.

The spin of moving electrons and the direction of rotation of the kinetic coloumns, along with the direction of flow of magnetrons, create two poles of a magnet. The magnetrons (kinetons) in the layers of the kinetic columns enter the South Pole and, when viewed from behind, appear to rotate clockwise. When they exit the North Pole while maintaining the same rotation, they are seems to be rotating counterclockwise when viewed from the front.

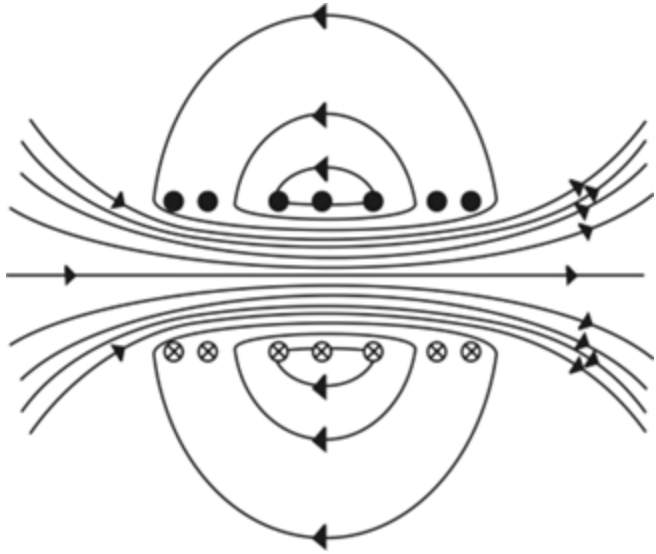

Figure 6.7: Rotating kinetons in rotating orbitums in sub shells with each shell at Quantum levels are depicted by 'magnetic line of forces' in a magnetic field, formed by rotating kinetic coloumns, which supports the free electrons circulating in a bar magnet.

These lines of force are always closed loops, unlike electric charge where the lines converge at a point charge. When an electron revolves counterclockwise in an external magnetic field perpendicular to the plane of its orbit, the force on it according to Fleming's left-hand rule will be outward. For clockwise orbits, the force will be inward. The density of magnetic lines of force, which indicates the strength of a magnetic field i.e., magnitude, is a result of the deformation of space at higher quantum levels.

Secondarily, like all other forces, smaller magnetic fields combine to produce larger ones. The strength of a magnetic field increases with the increased rate of spin of charged particles, as the treo model suggests that this is only possible when the number of kineton layers increase in all the supporting kinetic columns of these particles.

Oppositely rotating in opposite directions two spinning paired electrons and their rotating kinetic columns cancel out each other's net magnetic momentum, resulting in zero net atomic magnetic moment for

diamagnetic substances. On the other hand, paramagnetic substances with one valance electron have a single Bohr magnetron and ferromagnetic substances, such as Fe, Ni, and Co, have incomplete electronic shells and therefore have a large atomic magnetic moment. Magnetization of a substance refers to the alignment of the spins of all the electrons in atomic orbits in the direction of the applied magnetic field.

All kinetic, Electromagnetic, Thermodynamic, energy transfer of all forces and gravitational energy transfers are transfer of FULL one or multiple 'layers of kinetic coloumn' from donating body which 'adds layers in all kinetic coloumns of receiving body' and the remaining surplus kinetons left out with discrepancy in length of these layer goes to thermodynamic sink.

6.1.6 Mass unit (important of fine structure constant).

(**According to treo model, all matter is formed by integral multiples of 35.012 MeV; which is "mass unit" or 'composite mass of one unit electron'**)

All types of photons are formed by integral multiple of one quantum mass energy (S free treos). The free treos, are added as one unit of one quantum i.e., S free treos (present in one unit photon), at each of $\sqrt{S}$ quantum levels of first dimension of length to produce all $\sqrt{S}$ types of photons which forms complete EM spectrum.

Then in deformation of two dimensions, the increment of mass energy occur in one unit of one-unit electron made up of $\sqrt{S}$ quanta mass energy (i.e., $S \times \sqrt{S}$ free treos) at each of $\sqrt{S}$ quantum levels of second dimension (deformation in length and depth) and thus, it produces all elementary particles, nucleons, atoms, molecules and supports up to one–unit mass (i.e., Planck mass= 2.176×10^{-8} Kg), at their matching quantum levels. All big bodies are made up of multiple numbers of unit masses.

But when it comes to pack charged unit electron packets together (which may be visualized as one 'brick'), to form a packet of composite elementary particle or a nucleon, great amount of neutralization or

localization energy is required, (which may be visualized as 'cementing material') to overcome the strong repulsive forces in between two negatively charged unit electrons. Fine structure constant determines the kinetic energy required to balance one unit charge (mass energy of unit electron) and thus, MASS UNITS are formed which in turn form all matter particles.

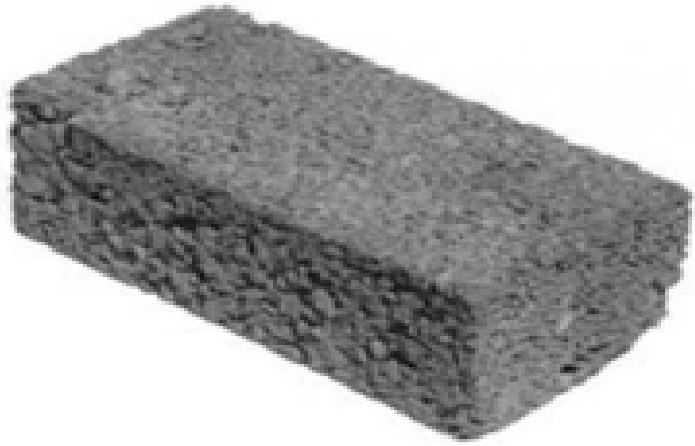

Figure 6.8: One-unit electron (as one brick) is a building block of all matter.

Figure 6.9: Each Unit electron (brick) with its 68.5 times of localization energy (cementing material) form one 'Mass unit'; while integral number of mass units form all elementary particles, as calculated.

The author is first person to observe and document it for the first time in his previous book; that 35.012 MeV is ONE MASS UNIT, which is Composite mass of unit electron = the mass energy of unit electron along with its neutralization or localization energy. All matter (mass energy packets of all elementary particles and nucleons) is produced with integral number of 'Mass units' (as shown below in table 3) and are placed at their respective matching quantum levels in second dimensional deformation.

Higgs mechanism

Bound treos of space matrix are the source of this localization energy. While describing the Higgs fields it was advocated by Mr. Peter Higgs, that **Elementary particles drag the Higgs field** (i.e., space matrix made up of bound treos) with them in which they move, by Higgs mechanism. Proofs are.

- Total 27 MASS UNITS in all three quarks form one Proton. Protons are composite particles; *most of Proton mass is not only its mass energy but predominantly its quantum chromo dynamics binding energy* which is attributed to mass less gluons. These are bound treos (kinetons) contributed by space matrix (as localization energy) or the wrapped Higgs fields.
- The known fact that 'mass of any fast–moving particle increases with its increasing velocity' (one of the postulates in theory of relativity), is due to transfer of kineton layers (along with its riding free treos) in all kinetic coloumns of moving body, from all kinetic coloumns of pushing body.

The formula for calculating, the 'composite mass of unit electron' which is named as MASS UNIT* is discovered by me and was earlier published for the first time in my previous book in 2015 [Reference 14]. *The known conventional understanding is, that fine structure constant is* ***coupling constant*** *and is ratio of energy required to counteract the force of repulsion in between two electrons vs. reduced Compton wavelength of photon*.

According to the proposed formula, MASS UNIT can be calculated by dividing the mass energy of unit electron 0.511 MeV by twice of 'fine

structure constant,' with its known value of 1/137.035999084 [Co data 2018 value].

*MASS UNIT = Composite mass–energy of unit electron (35.012 MeV) = Mass energy of one unit electron/2 × Fine structure constant. 35.0126237 MeV = 0.510998918 MeV/(2 × 1/137. 035999084)

All elementary particles and nucleons have their mass energy, which is integral multiple of this MASS UNITS, within 1% deviation. (Figure 6.10)

PARTICLE	Known mass of elementary particles in Mev	Calculated Mass of all elementary particles in Mev	Known mass-calculated mass × 100/ known mass = Error in %	Number of composite unit electron masses in particle as observed here
LEPTONS				
Electron	0.51 Mev	0.51/ 2 (1/137.035999710) = 35.012698 Mev (Composite mass of unit electron or m_e)	0%	= 1
Muon	105.66 Mev	$m_e \times 3 = 105.3809$ Mev	0.26%	= 3
Tau	1776.99 Mev	$m_e \times 51 = 1785.6475$ Mev	0.48%	= 51
MESONS				
Pion	139.57 Mev	$m_e \times 4 = 140.0507$ Mev	0.34%	=4
Kaon	493.68 Mev	$m_e \times 14 = 490.1777$Mev	0.70%	=14
Eta	547.75 Mev	$m_e \times 16 = 560.2031$ Mev	– 0.22%	=16
Rho	775.8 Mev	$m_e \times 22 = 770.2792$ Mev	0.71%	=22
Omega	782.59 Mev	$m_e \times 22 = 770.2792$ Mev	1.57%	=22
Meson	1869.4 Mev	$m_e \times 53 = 1855.6728$ Mev	0.73%	= 53
Ds Meson	1968.3 Mev	$m_e \times 56 = 1960.7109$ Mev	0.37%	=56
B Meson	5279.4 Mev	$m_e \times 150 = 5251.9023$ Mev	0.52%	=150
Bs Meson	5369.6 Mev	$m_e \times 156 = 5391.955$ Mev	0.41%	=156
BARYONs				
Nucleons	938.27 Mev	$m_e \times 27 = 0945.3427$ Mev	– 0.75%	N=27
Lamda	1115.68 Mev	$m_e \times 32 = 1120.4062$ Mev	0.42%	N=32
Sigma	1197.45 Mev	$m_e \times 34 = 1190.4316$ Mev	0.59%	N=34
Xi	1314.18 Mev	me × 38 = 1330.4825 Mev	– 0.12%	N=38
Omega	1672.45 Mev	$m_e \times 65 = 1680.6095$ Mev	– 0.48%	N=48
$Lamda_s$	2284.9 Mev	$m_e \times 48 = 2275.8254$ Mev	0.397%	N=65
$Sigma_s$	2452.2 Mev	$m_e \times 70 = 2450.8889$ Mev	0.04%	N= 70
Xi_s	2466.3 Mev	$m_e \times 70 = 2450.8889$ Mev	0.62%	N=70
$Omega_s$	2697.5 Mev	$m_e \times 77 = 2695.9778$ Mev	0.05%	N=77
$Lamda^{\copyright}_s$	5654.0 Mev	$m_e \times 161 = 5637.0445$ Mev	0.29%	N=161

Figure 6.10: Mass–energy of all elementary particles and nucleons is integral multiple of MASS UNITS within 1% deviation.

While forming a nucleus by protons, neutrons, mesons, gluons and W and Z particles, this neutralization or localization energy (wrapped space matrix as cementing material with each unit electron) gets partially converted in to binding energy of nucleons, which is manifested as 8 types of Gluons (another type of bosons but made up of kinetic coloumns). The 68.5 times; neutralization or localization energy, binding energy (gluons), and supporting kinetic coloumns (of W, Z boson) all three are the components and source of ATOMIC ENERGY. The requirement of binding energy may vary in various elementary composite particles, which is

observed as MASS DEFECT. The number of 'free Treos' as calculated in different packets.

- Unit Photon = $1.855394405 \times 10^{43}$ Free Treos
- Gamma photon of 1.02 MeV = 2.8724704×10^{64} Free Treos
- Electron of 0.511 MeV = $1.439491604 \times 10^{64}$ free treos
- Proton = $2.64416818 \times 10^{67}$ Treos
- Neutron = $2.64781297 \times 10^{67}$ Treos
- Unit mass (Planck mass) = $3.442488398 \times 10^{86}$ Free Treos = or 2.17643×10^{-8} Kg (Planck mass)
- One Kg mass = 1.5808523×10^{94} Free Treo
- Number of treos in one unit charge i.e., one eV = $1.439491604 \times 10^{64}$ free treos. (Charge on one treo = 1.112167×10^{-83} coulomb; and one coulomb charge is on $0.899240188 \times 10^{83}$ free treos, in 6.2×10^{18} unit electrons)
- Known Charge mass ratio = 1.76×10^{11} coulomb/Kg is verified. [$1.76 \times 10^{11} \times 0.899240188 \times 10^{83} = 1.58(26624)\ 10^{94}$ free treos are in one Kg mass]
  Similarly, by using these above mentioned values, number of free treos (Energy particles) can be calculated in any type of photon, in all type of elementary particle and in any element or in any cosmic body.

6.1.7 Weak forces (executed due to dualistic nature of bosons and elementary particles).

(WEAK FORCES and W, W +, W-, W+- AND Z PARTICLES)

In this hyper dense area of Atom W +, W- (of mass 80.379 GeV/c^2) and slightly bigger Z particles of intermediate vector boson (91.187 GeV/c^2) are mega size supporting kinetic coloumns, which are formed with or without charges (according to their direction of rotation) in pyramid shaped area of deformation and counter deformation where these two deformations overlaps in second dimensional deformation [Reference 14, page 119 of referred book], and are required to support densely packed nucleons and sub nuclear units (alpha particles) with their dualistic

nature, the *all Weak forces Bosons act as vehicles* of transportation of these units of radioactivity across atomic barrier.

Alpha particles are sub- nuclear unit of four nucleons (a Helium nucleus) and it is known to have produced 99 % Helium on Earth, while beta particle is energetic electron moving at very fast relativistic speed; which is emitted in beta decay of neutron. [Beta decay is conversion of Neutron to Proton with release of one beta particle carried away by one W boson]. While third type of radioactive emission of gamma ray occurs from atom in fission, fusion, alpha decay, or gamma decay.

Here approx. 10^{16} bound treos is the RC wavelength of these bosons of weak forces, which matches with the range of action of these bosons of weak forces (which is less than the size of atomic nucleus). They could execute these transportations by converting alpha and beta particles in to waves due to their dualistic nature, required to cross the atomic barrier by quantum tunneling, i.e., by spreading all treos forming this alpha particle, on equal number of transporting kinetons in W or in Z bosons (it is explained in detail as wave particle duality). The spread of all free treo energy of all elementary particles on its supporting kinetons is responsible for many unexplained phenomena observed in quantum world can be thus explained and bulky alpha particle can cross the nuclear and atomic barrier.

Like photons intermediate vector bosons of W and Z particles have spin 1 (as they also regain their orientation with its one rotation on its one wave) and are not very much different in geometry from photons except they condense above 10^{30} Quantum level in second dimensional deformation. Having charge the weak forces bosons cannot be accumulated in increasing numbers as beam of photon, and thus, the weak forces remain weak, while EM forces by piling of photons can become very strong.

6.1.8 Formation of All Elements of periodic table in four pairs of mutually entangled shells.

We saw that mass energy accumulated by S free treos (one quantum mass energy) at each of $\sqrt{S}$ quantum levels of first dimension and formed all photons of EM spectra.

While in second dimension, √S quanta mass energy or √S x S free treos (but not unit electron itself) increases at each of quantum level to form all energetic electrons and elementary particles. But in the union of full unit electron packets, to form all known composite particles and nucleons, the question arises how all negatively charged unit electrons could be packed together in a packet?

The answer lies in the fact that each unit electron (one brick) is associated with 68.5 times of its mass (as its cementing material) which are bound treos (as kinetons) coming from space matrix and together form one MASS UNIT of 35.012 MeV.

Integral multiples of such MASS UNITS form all known elementary particles and nucleons (table 6.10). It indicates that all matter in universe is made up of integral number of these Mass units (i.e., unit electrons wrapped with space matrix). Such 27 'Mass units' will form one proton; 27 × 35.012 ≈ 938.27 MeV i.e. Proton mass energy.

Free Protons are stable particle with its half-life 10^{32} years while free Neutron or bound Neutron is an unstable particle and transmutes by beta decay in proton in 881 seconds (about 14 and a half minutes) by emitting a fast Electron i.e., beta particle.

'Neutralization of positive and negative charges along with 'spin angular momentum' by + and- spin electrons and 'orbital angular momentum' in *s and s', p and p', d and d', f and f' orbits;* is required to form all elements.

In formation of all elements, the coloumn geometry prevails, as it form only four pairs of *shells mutually entangled at four quantum levels in deformation and counter-deformation of space matrix,* (Reference 51), are (1) *s,* and *s'* (2) *s, p* and *s', p'* (3) *s, p, d* and *s', p', d'* (4) *s, p, d, f* and *s', p', d', f'* sub shells in which the number of orbitals are 1 in *s*, 3 in *p*, 5 in *d* and 7 in *f* and each orbit will be filled with one pair of electrons, one + spin electron and one – ve spin electron.

Thus, 1 +1; 8+8'; 18+18'; 32+32' quantum entangled electron orbits are filled at seven energy levels to form all elements described in periodic

table. [See below Figure 6.11 and for very detailed description please refer to book "Structure and Working of universe (Fifth dimension and quantum gravitation)", 2015 Reference 14]

With the addition of each proton at nucleus, alternately one electron of + spin and one of – spin will fill up preformed vacant orbits by following set rules of Pauli's, Aufbau's and Hund's.

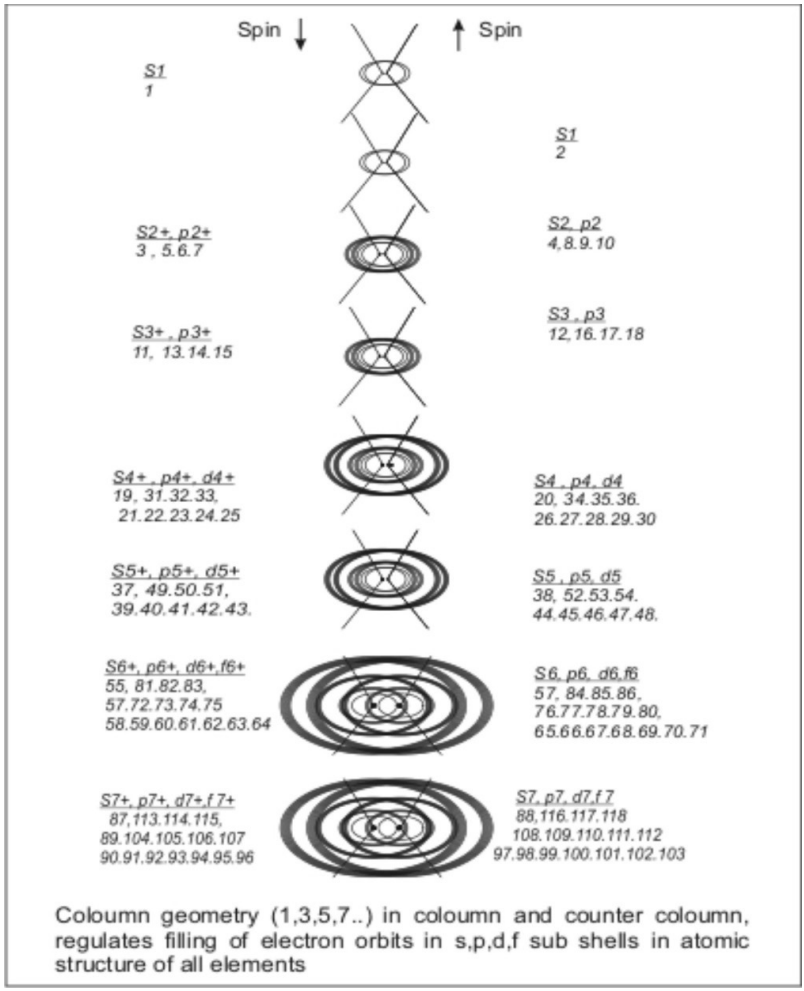

Figure 6.11: At four quantum levels the increasing number of *s, p, d, f* orbits in sub shells are filled with + and – Spin electrons in all 4 pairs of mutually entangled shells which are formed in deformation and counter deformation of unit space matrix, forms all 118 (or 120) elements of periodic table.

In second dimensional deformation with the addition of one proton (or neutron) the mass energy of nucleus of each new element will increase and the nucleus will now shift at a higher quantum level. All protons (each proton with its mass energy spread on its RC wavelength) in two rotating vortexes as twisted double strands can be accommodated in conventional size of nucleus.

6.1.9 The slow rotation of mercury and clockwise rotation of Venus from east to west.

The opposite direction of rotation of Venus from all other planets was explained conventionally either due to impact of big meteoroids or asteroids 'Impact theory' or by action of 'tidal wave of Sun holding dense atmosphere of Venus' on its side facing Sun. But my explanation for this phenomenon is that it is because of moving kinetic coloumns (kinetic energy) along with their gravitational waves, in gravitational field of all affecting cosmic bodies.

- Moving from west to east along with counterclockwise rotating sun, the magnitude of Kinetic energy in Gravitational wave of layers (orbit) in gravitational field of Sun acting on 'side of Mercury facing sun' which is nearer to sun will try to move it clockwise and thus, it will *slow down anticlockwise rotation of mercury* (58.5 earth days = one day of mercury, and 88 earth days = one year on mercury). (Fig 6.12)
- Sandwiched among Mercury and Earth and affected by two nearby anti-clock rotating gravitational waves of both planets Venus rotates on its axis in its *very slow clockwise rotation* (243 earth days = one day of mercury, and 224.7 earth days = one year on mercury). (Figure 6.13)

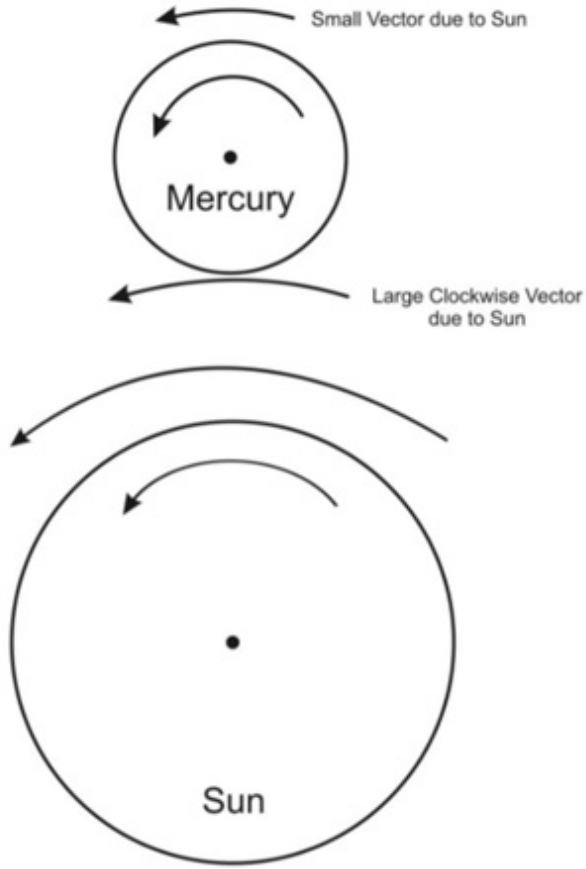
Small Vector due to Sun
Mercury
Large Clockwise Vector due to Sun
Sun
Anticlockwise rotating body and gravitational field of Sun, due to its large clockwise acting vector on proximal side of mercury, will markedly slow down anticlockwise rotations of nearby placed small planet Mercury.

Figure 6.12: Magnitude of Kinetic energy in Gravitational waves of Sun on 'near side of Venus from sun' and on 'far side of Venus from sun' will differ in gravitational field of Sun, and large clockwise vector will try to rotate Venus clockwise.

MERCURY
Direction of Vector acting on Venus due to rotating kinetic coloumns of mercury
VENUS
Direction of Vector acting on Venus due to rotating kinetic coloumns of Earth
EARTH
Rotating Anti clockwise Kinetic coloumns of Mercury and Earth Rotates the sandwiched Venus Clockwise

Figure 6.13: Sandwiched among Mercury and Earth and affected by two nearby antilock rotating gravitational waves of both planets at each quantum level in gravitational field, Venus rotates in slow clockwise rotations.

6.1.10 Quantum Gravitation in Relation to Atomic Structure (regulated by fine structure constant).

The gravitational load exerted by a body of mass M unit masses is equal to the square of unit masses in the body (M^2) at its gravitational center. This load is balanced with kinetic energy of M^2 gravitons. The gravitational force becomes weaker with increasing distance as the central load spreads out in all directions and planes as 'diluted mass pressure' at each quantum level and is reacted accordingly. At any given layer of the gravitational field, the mass pressure is equal to 2MG or 2 M free treos. This load spreads uniformly over 2n-1 apex bound treos at a distance "n" from its gravitational centre and is balanced by the formation of '2n-1 kinetic columns' which all together have total 2MG or 2M kinetons kinetic energy.

Similarly, this pattern and coloumn geometry is also followed at atomic quantum levels and is demonstrated by conventional formula (En =2.178 $\times 10^{-18}$ J Z^2/n^2). With each increase of Z number (by inclusion of one Proton) the central load increases by Z^2 at nucleus, and the full proton mass pressure of 2 Z gets distributed and neutralized at 'n' th atomic quantum level, at 'n' bound treos distance from nucleus (radius of Bohr orbit), according to coloumn geometry on n apex bound treos (R C wavelength of energetic electron). It forms a full wave on 2n-1 apex bound treos on full length of this layer of atomic kinetic coloumn which can support 2 proton mass pressure. The circumference of orbit (i.e., Crompton wavelength) of this energetic electron wave is formed by (2n-1) × π bound treos.

A proton made up 'm' treos, exerts a central load of m^2 at nucleus and in layer of the atomic kinetic column at a distance "n" from the center, spreads its total 2m mass pressure on each apex bound treo as charge of 13.6 eV [i.e., 2.178 $\times 10^{-18}$ J or 19.5770858 $\times 10^{64}$ free treos as known Energy of hydrogen atom at Bohr orbit] at each of 2n-1 apex bound treos in Bohr orbit, and gets neutralized by kinetic energy at each apex bound treo by formation of a sub kinetic coloumn and thus, it forms one full wave (which is 137 times lengthy then proton wave) of one energetic electron with its Compton wavelength equal to circumference of Bohr orbit. Whereas total kinetic energy at 'n' apex bound treos of this wave, it can balance 'm' free treo load of one proton mass. Thus, mass pressure of one proton and its 1 + eV positive charge in hydrogen atom at the Bohr orbit is neutralized by the kinetic energy of one energetic electron wave and its 1 - eV negative charge, in Bohr orbit. [Not only 'Neutralization of positive and negative charges' occur but neutralization of its 'spin angular momentum' is also done by + and- spin electrons, along with the neutralization of 'orbital angular momentum' due to opposite directions of revolution of electron; to form an atom.]

To form an atom of any element Mass pressure of nucleus at a distance or radius "n", is balanced by the total kinetic energy on 2n-1 apex bound

treos forming one full wave of electron in each orbit and same is required at all 'atomic quantum levels'.

- Proton is made up of 27 'mass units' (or $2.62421482 \times 10^{67}$ treos)
- The proton of m mass, being 'wave particle' will exert its load in 'square of proton mass' or m^2 at its proton wave, which will also decide the speed of orbital motion of proton wave.
- Being a 'wave particle' this Proton will exert a load of 2 proton masses (2m) of $2 \times 2.62421482 \times 10^{67}$ treos, as its load along with its charge on each layer of its atomic coloumn.
- In Hydrogen atom the Bohr orbit is at 137 × RC wavelength of electron (which can be taken as 'n' bound treo = 'r' radius).
- 13.6 eV known energy of hydrogen atom it is mass energy of $19.5770858 \times 10^{64}$ free treos which are present on each apex bound treo in Bohr orbit.
- ($19.5770858 \times 10^{64} = 1.439491604 \times 10^{64} \times 13.6$ i.e., 1 eV charge of one electron is multiplied by 13.6)
- This load and charge will be distributed on 2 (137 × RC wavelength of electron)-1 apex bound treos i.e., along wavelength of two energetic electrons with +spin and -spin (on 2n-1 bound treos) electrons as two waves (in one matter wave) will support this load and charge.
- Energy of hydrogen atom divided by fine structure constant (i.e., 1/137) calculates mass of hydrogen atom (i.e., Proton mass).
- (i.e., $19.5770858 \times 10^{64}$ free treos divided by fine structure constant (1/137) is mass energy and charge on 2.6×10^{67} free treos of one 'proton' mass. = $19.5770858 \times 10^{64}$ divided by $1/137 = 19.5770858 \times 10^{64} \times 137 = 2.6 \times 10^{67}$)
- Not only +1 eV proton charge is neutralized by -1 eV electron charge; but its $19.5770858 \times 10^{64}$ free treos load of one proton exerted at each apex bound treo in Bohr orbit is neutralized by kinetic energy of $19.5770858 \times 10^{64}$ kinetons, on each of 'n' number of apex bound treos by a sub kinetic coloumn in RC wavelength of one energetic electron.

- In Bohr orbit 19.5770858 $\times 10^{64}$ free treos load is present at each of 2n-1 apex bound treos (= 2× electron wavelength x 137) and full exerted load 2 proton masses (2m) of 2 × 2.62421482 × 10^{67} treos is supported by these 2n-1 kinetic coloumn each having same number of (19.5770858 $\times 10^{64}$ kinetons); in full wavelength of 'one energetic electron of hydrogen atom'; Where 2n-1× π is Compton wavelength of energetic electron wave or full circumference of 1 st Bohr orbit.
- The revolution speed of electron in Bohr orbit of hydrogen atom is 2180 Km per second =1/137 of speed of light.{orbital speed is always equal to number of layers in each kinetic coloumn on each apex bound treo along wavelength}
- Dividing RC wavelength of electron by fine structure constant (i.e., 1/137) we get the radius of Bohr orbit, on which we calculated.
- Multiplying RC wavelength of electron by fine structure constant (i.e., 1/137) we calculate classical radius of electron.
- Energy of hydrogen atom is 13.6 eV, when converted in Joule, it is equal to 2.178×10^{-18} J or 'Rydberg constant for hydrogen atom; R^H
- 13.6 eV 'ground energy of hydrogen atom' also drives the value of 'Rydberg constant in wave number ': R^w = 1.09677.57 $Cm^{-1}s$

Thus, inferences are, that according to proposed coloumn geometry the 'mass pressure of one Proton' (in hydrogen atom) exerted at first Bohr orbit (at 'n' bound treo radius), is supported on 'n' apex bound treos (=RC wavelength or on half matter wave of energetic Electron in orbit) and its load of 2 proton masses is neutralized on 2n -1 apex bound treos in Bohr orbit. It is one type of action –reaction mechanism.

The atomic nucleus can be taken as 'Charge singularity' and its orbits can be taken as Quantum fluctuations of fields around this singularity.

With one proton at nucleus, at first atomic quantum level, the diluted mass pressure of this one proton at Bohr orbit is neutralized by energy of one energetic electron moving at 2180 km (about 1354.59 miles) per second in Bohr orbit i.e., on one orbit in first ***s*** sub-shell. (Orbital

speed = number of bound treo layers in each sub kinetic coloumn on each apex bound treo= Frequency of wave)

We will achieve our goal of explaining 'atomic quantum gravitation' by proving this relation in all elements of periodic table as below; with the help of existing formula of energy distribution pattern which is according to geometry of proposed kinetic coloumn in treo model.

(13.6 eV or 19.5770858 $\times 10^{64}$-1 kinetons when converted in Joule, it is 2.178×10^{-18} J, which is known value of 'Rydberg constant for hydrogen atom; RH). To calculate 'm' or base energy at nucleus of any atom; the known formula is $E1 = 2.178 \times 10^{-18}$ J Z^2 (where Z is number of Protons in its nucleus).

This formula indicates that; with the increase of Z number (number of protons at nucleus) and this **load increases by square (Z^2) of proton number at centre and it will now be distributed** according to conventional formula $En = 2.178 \times 10^{-18}$ J Z^2/n^2 (where 'n' is atomic quantum level) which is in accordance **with the proposed coloumn geometry in *s, p, d, f* electron orbits.**

Thus, though each orbit will have 2.178×10^{-18} J energy (= 13.6 eV energy in wave of energetic electron) at each apex bound treo, but each orbit is formed on its proportionately increasing distance (wave lengths).

Thus, with increasing radius i.e., "n", of new formed orbits the same load will be distributed on next quantum level on increased number of 2n-1 apex bound treos and will be supported by proportionally lesser kinetic energy kinetic coloumn with decreases energy and speed of orbital motion of electron, as observed in this orbit.

(2 protons at nucleus) According to the above formula for 2 protons at nucleus the load will be four times [i.e., $2^2 \times (2.178 \times 10^{-18}$ J] and its diluted mass pressure will be supported by 4 electron waves (1+3 =4), with addition of 3 orbits of '*p*' sub-shell. At this second quantum level the 4 times increased energy at nucleus will now be distributed and supported at 4 orbits by 4 electrons. But the Speed of Electron will be half or 1090 Km per sec as '***p***' orbits are at four times radius than first orbit.

(3 protons at nucleus) For 3 protons at centre the central load will be 3^2 × (2.178 ×10 $^{-18}$ J) and its diluted mass pressure will be supported by 9 electrons (1+3+5 =9), with addition of 5 orbits in '***d***' sub-shell. At third atomic quantum level with 9 times energy at nucleus load will be nine times, will now be distributed and supported at 9 orbits by 9 electrons. But the Speed of Electron will be one third or 727 Km per sec in '***d***' orbits at nine times radius than first orbit.

(4 protons at nucleus) similarly for 4 protons at centre the load will be in square i.e., 4^2 (2.17 × 10 $^{-18}$ J) and its diluted mass pressure will be supported by 16 electrons (1+3+5 +7 =16), with addition of 7 orbits in '***f***' sub-shell. At fourth atomic quantum level the increased 16 times energy at nucleus will now be distributed and supported at 16 orbits by 16 electrons. But Speed of Electron will be 545 Km per sec in '***f***' orbits at sixteen times radius than first orbit.

With increasing number of protons one by one at nucleus the deformation increases to form one by one 8 pair of shells (kinetic coloumns) at four quantum levels (in deformation and counter – deformation) on which forms all elements of periodic table and its energy distribution at K, L, M and N energy levels is according to proposed coloumn geometry.

K energy level = 1.312×10^3 k J mole - 1 = E :

L energy level = 3.2 ×10^2 k J mole - 1 = E/4 :

M energy level = 1.46×10^2 k J mole - 1 = E/9:

N energy level = 82 k J mole - 1 = E/16

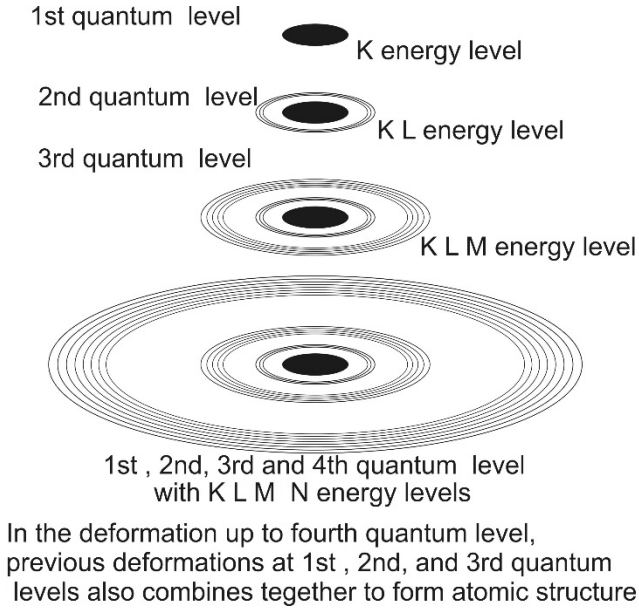
1st quantum level
K energy level
2nd quantum level
K L energy level
3rd quantum level
K L M energy level
1st , 2nd, 3rd and 4th quantum level
with K L M N energy levels
In the deformation up to fourth quantum level,
previous deformations at 1st , 2nd, and 3rd quantum
levels also combines together to form atomic structure.

Figure 6.14: Orbits at four quantum level with increasing number of s, p, d, f sub shells, representing K, L, M, N atomic energy levels.

Only empty orbits are formed with the addition of new proton, which are subsequently filled by negatively charged electrons one by one, with + spin and – spin electrons in each orbit in a pair of 4 kinetic coloumns which are formed both in deformation and counter deformation only at four quantum levels to form all elements of periodic table, in Figure 6.11.

One Electron adds only when a positive charged proton is added at nucleus. The number of electrons and their pattern of placement, decides shape of outer most electron orbit of the atom of any element, according to its valency and are responsible for all chemical and physical properties of this element; or in other words the size, shape, amount and structure of space matrix deformed by an atom is responsible for all chemical and physical properties of this element (i.e., negative print of this element).

6.1.11 The important milestones of QUANTUM GRAVITATION.

(What is Quantum Gravity?)

We have to note here, that the increasing load of free treos at any one point either at one apex bound or at gravitational centre of body is supported by equal number of kinetons in the kinetic coloumns (or in graviton coloumn of an graviton) thus, formed; @ one free treo load is supported by one kineton by S vibrations in one Unit Time of one second on space matrix; and the number of kinetons in such supporting one kinetic coloumn may range from 1 kineton at one apex bound treo in EM wave of Unit photon to S^4 kinetons at one 'gravitational centre' of a 'unit black hole' or even more depending upon the load it has to support. It is uncertain that 'Super massive black hole' has *one unit or multiple joint gravitational centers*.

Not only Mass pressure but radial and angular momentum is also neutralized by space matrix by its changing geometry.

- To support one unit Photon; supporting each kinetic coloumn will have 1 kineton (converted from one bound treo).
- To support one unit Electron; each orbitum in sub shell of Shell (kinetic coloumn) will have S kinetons.
- To support one Proton; each kinetic coloumn will have $\sqrt{S}$ x S kinetons (× 13.6 eV) present at each apex bound treo in one 'energetic electron' at Bohr's orbit.
- To support one unit mass; each graviton coloumn (of one 'graviton') will have S^2 kinetons.
- To support load of $\sqrt{S}$ unit mass body (approx. one billion Kg) and its load of S^3 free treos; each kinetic coloumn will have (S^3 kinetons) (present in one 'electron black hole').
- To support exerted load of S^4 free treos, the kinetic coloumn will have (S^4 kinetons) present in 'gravitational sphere' of one-unit Black hole.

UNIFICATION OF FORCES: These kinetic coloumns in increasing number of dimensions are working units which produce geometry of quantum gravitational field in all four dimensions of space matrix (space -time) to produce fields of all four basic forces.

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Appendix

Proposed working model of universe only uses Planck's units which were derived by normalization of Gravitational constant 'G', Quantum constant 'h' and Speed of light 'c'.' Quantum gravitation theory' could only be constructed, with Planck's parameters, which are used in this Treo model and some conversions are given below.

PLANCK'S UNITS

Planck length lp = $\sqrt{\hbar G/c^3} = 1.616199 \times 10^{-35}$ m

Planck mass mp = $\sqrt{\hbar c/G} = 2.17651 \times 10^{-8}$ kg

Planck time tp = $\sqrt{\hbar G/c^5} = 5.39106\ 0.53896896 \times 10^{-44}$ s

Planck energy Ep = $\sqrt{\hbar c^5/G} = 1.956 \times 10^{9}$ J

Planck angular frequency p = $\sqrt{c^5/\hbar G} = 1.855394405 \times 10^{43}$ s–1

Planck force Ep/lp = $\sqrt{c^4/G} = 1.21027 \times 10^{44}$ N

Planck energy density Up = $Ep/lp^3 = c^7/\hbar G^2 = 4.636 \times 10^{113}$ J/m^3

Planck temperature Ep/kB = 1.417×10^{32}°K

Number of Bound Treos in One Meter. (1meter/Planck's least length)

One/$1.615788303 \times 10^{-35}$ meter = $0.618892956 \times 10^{35}$ bound treos per meter.

Number of Bound Treos in Femtometer (10^{-15} meters)

$0.618892956 \times 10^{20}$ bound treos per Femtometer.

Number of Bound Treos in one centimeter.

$0.618892956 \times 10^{33}$ bound treos per Centimeter.

Number of Bound Treos in one km. $0.618892956 \times 10^{38}$ bound treos per Km.

Number of Bound Treos in one Light Year. $60 \times 60 \times 24 \times 364.25 \times 1.855394405 \times 10^{43} = 5.8379 \times 10^{51}$ bound treo distance per light year .

Number of Bound Treos in one Mega Parse One parse = 3.26 light yr. $3.26 \times 5.8379 \times 10^{51} = 19.031 \times 10^{51}$ bound treo distance is one parse = 19.031×10^{57} bound treo distance is one mega parse.

Number of Bound Treos in radius of present size of universe- 10^{62} bound treo distance radius = 13.7 billion light years.

Number of Bound Treos radius of One Fully Expanded Future Universe before big crunch S^2 or 10^{86} bound treo distance radius.

Total life Span of Universe $3.441937353 \times 10^{86}$ vibrations or $1.855394405 \times 10^{43}$ seconds or S seconds.

Number of vibrations in one second (cosmic rhythm) = Planck's frequency - One second/Planck's least time = $1/0.53896896 \times 10^{-43}$ sec. = $1.855394405 \times 10^{43}$ vibrations per second

Birth of Photon- Each atom constantly absorbs energy and releases photon at its unique frequency; with jumping of an electron from higher to lower energy shell by one (or more) quantum levels.

Energy of photon = -2.18×10^{-18} ($1/n^2$ final – $1/n^2$ born initial)

its Frequency= 4.6×10^{14} Hz

Wavelength= 6.56×10^{-7} m (Wavelength in bound treos = 6.56×10^{-7} m × $0.618892956 \times 10^{35}$ Bound treos per meter = 4.0599378×10^{28} Bound treos)

Speed of Light- In Planck's least time by one vibration the photon packet is pushed from 'one bound treo' to 'next bound treo' on space matrix.

Number of Vibrations in one Second =

One second/Planck's least time = $1/0.53896896 \times 10^{-43} = 1.855394405 \times 10^{43}$ vibrations per second (i.e., S number of vibrations).

Then speed of photon = $1.855394405 \times 10^{43}$ i.e., S bound treo distance per second

Speed of Displacement of Photon Per Second $1.855394405 \times 10^{43}$ vibrations per second × $1.615788303 \times 10^{-35}$ Meter*

Displacement per vibration = $2.997924577 \times 10^{8}$ meter per second, is conventional value of 'c'; the Speed of light.

*($1.615788303 \times 10^{-35}$ meter (one Planck's distance) is occupied by one bound treo.)

Gamma Photon and Pair Production (calculation) 2.8724104×10^{64} free treos are present in 1.02 MeV energetic gamma photon of $1.54814006 \times 10^{21}$ frequency. It will be divided into two equal parts of electron and positron pair, each having half ($1.439491604 \times 10^{64}$) free treos.

1. Mass Energy of Gamma Photon of 1.02 MeV $1.855394405 \times 10^{43}$ free treos per quantum × $1.54814006 \times 10^{21}$ frequency of wave = 2.8724104×10^{64} free treos.
2. Or $0.181584489 \times 10^{-29}$ kg calculated mass energy in gamma photon×$1.581858906 \times 10^{94}$ free treos per kg = 2.8724104×10^{64} free treos.

b. Energy of Gamma Photon of 1.02 MeV $0.181584489 - 10^{-29}$kg× (2.997924577 × 10^{8} meter per second) ^{2} = 1.632 10^{-13} Joule–Sec ($e = mc^2$) or 1.02 MeV × 1.6×10^{-19} J per electron=1.632×10^{-13}Joule–Sec.

c. Mass energy of Unit Electron of 0.51Mev $1.581858906 \times 10^{94}$ free treo per kg × 9.1×10^{-31} kg = $1.439491604 \times 10^{64}$ free treos

d. Energy of Unit Electron of 0.51Mev 0.51 MeV × 1.6×10^{-19} J per electron = 0.816×10^{-13} joule

e. **Compton Wavelength of (0.51Mev) Electron** ($2\pi r$ is circumference of circle or Compton wavelength, while radius r is 'Reduced Compton

wavelength of electron') 2.4263102389(16) × 10^{12} m Compton wavelength of Electron = 1.5016263 × 10^{23} bound treo distance.

f. **Reduced Compton Wavelength of (0.51Mev) Electron** (Rq quantum radius) (Compton wavelength/2) (2.4263102389(16) × 10^{12}m/2 = 0.38600391 × 10^{-12} M) = 23.88951 × 10^{21}Bound treo distance

1. **'Reduced Compton wavelength' of Electron × 137** (1/fine structure constant) = 5.29 × 10^{4} fm = 32.7225276 × 10^{23} Bound treo distance is Bohr radius of Bohr orbit in hydrogen atom.

2. **'Reduced Compton wavelength' of electron × 1/137** (Fine structure constant) = 2.82 fm = 1.7437599 × 10^{20} Bound treo distance is Classical radius of Electron (of 0.51Mev electron)

Mass Energy of Proton- 1.672313038 × 10^{-27} kg × 1.5808523 × 10^{94} (Free Treos per Kg) = 2.6417043 73 × 10^{67} free Treos

Proton = 2.641704371 × 10^{67} free Treos Mass

Mass Energy of Neutron-1.67 × 10^{-27} kg × 1.5808523 × 10^{94} Free Treos per Kg = 2.645363273 × 10^{67} free Treos

Neutron = 2.645363273 × 10^{67} free Treos

Mass Energy of W Boson- 14.24192075 × 10^{-26} kg × 1.5808523 × 10^{94} Free Treos per Kg = 22.52870912 × 10^{68} free treos or 80 GeV.

Mass Energy of Z Boson 16.02216084 × 10^{-26} kg × 1.5808523 × 10^{94} Free Treos per Kg = 25.34479782 × 10^{68} free treos or 90 GeV.

Mass Energy of Unit Mass (Planck Mass) One–unit mass 2.17651 10^{-8} kg × 1.5808523 × 10^{94} free treos per kg = 3.442488398 × 10^{86} free treos, i.e., S^2 free treos.

Mass Energy of Carbon Atom 2.641704373 × 10^{67}× 12 nucleons = 31.700 × 10^{67} free treos Mass of one kg Carbon 5.0188 × 10^{25} number of carbon atom in one kg × 31.700 × 10^{67} Free Treos in one carbon atom. = 1.5808523 × 10^{94} Free Treos Mass Energy in one kg weight

One Kg mass = 1. 5808523 × 10^{94} Free Treos. Mass unit of one-unit blackhole S^3 free treos or S unit masses = $(1.855394405 \times 10^{43})^{3}$ = $6.3871737 \times 10^{129}$ free treos

Distance of Planetary orbit of Earth from Sun (semi major axis of Earth) $0.9258638622 \times 10^{46}$ bound treo distance from Sun.

Speed of Revolution of Earth 29.7934848 km (about 18.51 miles) per second = $1.84389778 \times 10^{39}$ bound treo distance per sec

Size of Planetary Orbit of Earth

i. Circumference of orbit = 2r × π (Pai) [$2 \times 0.9258638622 \times 10^{46}$ –1 bound treos × π (Pai)] = 5.8197156×10^{46} bound treos form orbit of planet Earth Or
ii. Based on Orbital speed of earth $1.84389778 \times 10^{39}$ bound treo distance per second × 31557600 seconds (about 1 year) in one year = 5.8188989×10^{46} bound treo distance in one year.

ELABORATING FINE STRUCTURE CONSTANT

1. Reverse fine structure constant ≈ i.e., 137 is 33 rd prime number.
2. Reverse fine structure constant ≈ 0.1 × 1.11×11.111 × 111.1111 = 137.035 (Note down 1,3,5,7 pattern of coloumn geometry in all mathematics of universe)
3. 137 prevails in universe because it shapes geometry of universe as it makes golden ration (1: 1.6803) [If you make 137-degree arc in a circle and arc in rest of circumference of a circle, two are in golden ratio. Golden ratio 1:1.62 prevails in universe and employ in carving of different shapes of flora (1, 3, 5, 7 pattern of florescence) and fauna, governs musical notes, structure of pyramids, shape of egg and our egg-shaped universe.]
4. Value of Fine structure constant is calculated = Ke^2/hc = coulomb × Square of charge/speed of light × Planck constant = $7.29735254 \times 10^{-3}$ = 1/137

5. It is observed by author for the first time that 'Fine structure constant' Calculates 'MASS UNITS: 'Electron mass energy of 0.51 MeV when divided by twice of fine structure constant calculates the [composite mass energy of electron 'MASS UNIT' i.e., 35.01MeV (mass energy of unit electron + 68.5 times localization energy)]. All matter (elementary particles and nucleons) has integral multiples of 'mass unit'.
6. Single electron around hydrogen atom in Bohr's orbit moves at, speed of light/137, at about 2200 km (about 1367.02 miles) per second and in any element with its atomic number Z, electron moves Z/137 times the speed of light.
7. If you divide RC wavelength of electron by fine structure constant you calculate the radius of Bohr orbit.
8. If you multiply RC wavelength of electron by fine structure constant you calculate classical radius of electron.
9. Energy of hydrogen atom. When it is converted in joule it is value of Rydberg constant R_H.
10. It is used to calculate Rydberg constant R ω = cube of fine structure constant divided by 4 r.
11. If you divide the energy of hydrogen atom by fine structure constant you calculate mass of hydrogen atom. (Energy mass ratio in hydrogen atom)
12. Atomic structures of all elements of periodic table are produced in a pyramid shaped area produced by overlapping of increasing deformation and counter deformation in second dimension of 'unit space matrix'. This pyramid shaped deformation is in golden ratio (in which 'area of base of pyramid' and its 'height of pyramid' is in golden ratio) at four quantum levels (total 8 quantum levels of deformation and counter deformation) forms all 118 elements of periodic table. 'Fine structure constant' plays an important role in all creation in the universe.

    i. It determines the energy required to balance one unit charge

(mass energy of unit electron) and thus, MASS UNITS are formed which in turn form all matter particles. Mass unit is (mass of unit electron + amount of 'localization energy' to counteract its negative charge). This can be calculated by dividing the mass energy of unit electron (0.51 MeV) by twice of fine structure constant.

ii. Single electron around hydrogen atom in Bohr's orbit moves at, speed of light/137, at about 2200 km (about 1367.02 miles) per second and in any element of periodic table with its atomic number Z, electron moves in closest orbit by Z/137 times the speed of light.

iii. The energy of hydrogen atom when it is converted in joule, it is value of Rydberg constant (R_H), which calibrates the frequency of all *photons and electrons ejected* from an atom by quantum jumping of energetic electrons.

Glossary

Treo – Primordial particle of creation, it is one dimensional and of Planck's least length. As free treos it forms all matter and as bound treos it constantly vibrates at Planck frequency and thus, constructs five positive dimensions while alternately arranged with five negative dimensional voids it weaves 10-dimensional space matrix.

Dark matter and Dark energy Free Treos (EM energy and Mass energy) 5% of visible universe is made up of free treos, which forms all photon, all mass and all charge.

Bound treos (energy particles) in space matrix constitutes 27% universe as dark matter only after being converted in to Kinetons. Remaining undeformed bound treos are responsible for 68% of universe which present itself as uniform omnipotent dark energy, or potential energy of space matrix which is produced by vibrations of all bound treos simultaneously, @ S times per second.

Voids – Voids are alternately woven with treos to construct 10-dimensional omnipresent space matrix, where it represents five negative dimensions of universe. Voids were fully curled up at big bang and since then it is constantly uncurling and thus, they expand our universe and assigns value of Hubble constant and cosmological constant. Five negative dimensional voids have NO length, NO breadth, NO depth and it calibrates gone time of universe (denoted by percentage of uncurling (increased Size) of each void of space matrix along with passage of time).

Cosmological constant -Each void uncurls equal to $1/S^2$ part of each treo in space matrix per vibration, which leads to expansion of universe at

observed rate. This expansion of the universe is responsible for the aging of all living and non-living things including of our universe itself.

Space Matrix – Omnipresent, omnipotent, ten-dimensional matrix of universe, which reacts to every action has three inter dependent components of SPACE– TIME–ENERGY. Virtually it qualifies with all the characteristics assigned to GOD.

Coloumn – With gradually increasing load, One-, two- and three-dimensional unit Space and then fourth dimension of Space–time, by its gradual contraction at each next quantum level adds one layers in the coloumn of this dimension, which enlarges up to $\sqrt{S}$ quantum levels in each of four dimensions to form fields of all four forces. The coloumn geometry is followed in each dimension with 2n-1 units in its each layer and n^2 units in 'n' layered Kinetic coloumn.

Kineton – One contracted bound treo is one kineton. Instead of vibrating in all S planes as bound treo, when it starts vibrating only in one plane in the direction of exerted load to support it, by its S vibrations in one second.

Orbitum – Each orbitum is made up of S Kinetons and supports load of one Quanta (S number of free treos) mass energy by its one rotation in one second, such 2n-1 units are in each sub shell (layer) of shell (kinetic coloumn in second dimension) in this two-dimensional configuration.

All equal energy orbitums present one below other in all shells along its RC wavelength, form one orbit. thus, *s, p, d, f* sub-shells with 1, 3, 5, 7 orbits are formed.

Graviton coloumn and one graviton – One full graviton coloumn is formed by layer by layer deformation at $\sqrt{S}$ quantum levels and after its full formation in second (two) dimension at one-unit gravitational centre (now named as one Graviton) it supports one unit mass (Planck's mass).

Unit photon – Packet of S number of free treos (one quanta mass energy).

Unit electron – Packet of √S × S number of free treos (√S quanta mass energy).

Unit mass – Packet of S × S number of free treos (S quanta mass energy)

Electron black hole (of the size of one electron as it also has √S bound treo layers in length and breadth).

Packet of S number of gravitons in √S layered kinetic coloumn of third dimensional deformation (i.e., S quanta kinetic energy) supports equal numbers to free treos in One-Billion-ton mass energy i.e., √S quanta mass energy (√S × S × S free treos) at its solitary gravitational centre.

Unit black hole – (gravitational sphere i.e., biggest kinetic coloumn of deformation in four dimensions of space –time; in 300 thousand km or about 186411.36 miles radius) – Packet of S number of electron black hole or S × S number of gravitons, to support a body of S unit masses (S × S × S number of free treos).

Quantum Tangling-Why and how – Universe is omnipresent continuum of space-time-energy which contracts to support loads and then local counter deformation is a must to maintain its continuity. These deformations and counter deformations remain **quantum entangled** and any action (even to measure one) will be known to other instantly, immaterial to space gap in between. It is important to note, that the present matrix of 'our present contracted Universe' is woven by Gravitons (deformed and contracted matrix) of *no mass energy but with infinite range of Action* (universal signals) executed by its graviton coloumns.

The Book's Story

I started my theoretical physics journey after being intrigued by the results from a simple experiment of briefly exposing x-ray plates at fixed intervals during a total solar eclipse (TSE), which captured unexplained streaks consistently, and the extent of such streaks was much larger during the period of totality. I refreshed my knowledge of college-level physics and started working on various hypotheses to tie together such unexplained physical phenomena based on existing physical concepts.

It resulted in the development of the new concept of "Ecliptic Window", i.e., Sporadic showers of charged particles from the shadow area in the ionosphere responsible for 'sporadic complete blindness among viewers' and most TSE-related effects observed on Earth. I received recognition and invitations to present my theory related to TSE phenomenon at major national and international conferences.

My focus gradually shifted to the larger unsolved problem of Gravitation and Grand Unification Theory and how it might be tackled through less conventional approaches. I am a visual thinker, and I believe that the answer to this problem can be found in the properties and geometry of space-time. I have been further reading, developing my ideas, and refining my thesis around "Quantum Gravitation" to resolve the unification puzzle.

I first touched upon the concepts involved in Quantum Gravitation in my first book published in 2005 called "Inside a Wave." The ideas were still in their early stages in my next book "Structure and Working of the Universe - Quantum Gravitation and the Fifth Dimension" in 2015. It took further shape in July 2020, in my third book "Treo Model of Structure and Working of the Universe – The Cosmic Code." As it is a vast and far-reaching topic, the theory can still be in their infancy.

Among all mathematical models of string theory this simple and compact geometrical TREO model fills the vacant central place in describing universe; it puts all forces in one frame and leads us to QUANTUM GRAVITY.

An Important Final Note

Writers are not performance artists. While there are book signings and public readings, most writers (and readers) follow their passion alone in their homes.

What applause is for the musician, ***reviews*** *are for the writer.*

Books create a community among readers; you can share your thoughts among all those who will or have read the book.

Leave a thoughtful honest review and help me to create such a community on the platform on which you have acquired this book. *What did you like, what can be improved? To whom would you recommend it?*

Thank you, also in the name of all the other readers who will be able to better decide whether this book is right for them or not! A positive review will increase the reach of the book, a negative review will improve the quality of the next book. I welcome both!